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MACMILLAN'S NEW GEOGRAPHY READERS

AFRICA AND AUSTRALASIA



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New Geography Readers

AFRICA

AND

AUSTRALASIA

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CONTENTS.

GEOGRAPHY OF AFRICA.

PART I.

PART II.

PART III.

PART III.

PART IV.

GEOGRAPHY OF AFRICA.

PART I.

GENERAL GEOGRAPHY.

1. Africa has been so much cut off from the rest of the world by various causes that it has been almost unknown till within comparatively recent times; and thus it has well deserved its title of "The Dark Continent."

2. Of these various causes, the most important have been its unbroken coast-line, the badness of its climate in many places, its huge size, and the savage character of most of its native people.

3. In shape it resembles South America, but no two continents could be much less alike in their real construction, especially in the relation of highland to lowland and the presence of a backbone of continuous mountains.

Surroundings.

1. As we have already seen, the coast is peculiarly unbroken, and the absence of bays and gulfs greatly affects both the climate and the commerce of the continent.

2. The *west* coast between the Strait of Gibraltar and Cape Verde, the most westerly point of Africa, is more or less useless; in the northern half it has behind it the steep wall of the Atlas Mountains, and in the southern half it has the low sandy border of the Sahara Desert.

3. From Cape Verde to Cape Coast Castle the coast is more useful than farther north, but is unhealthy, and the steep edge of the Sahara tableland behind it makes communication inland very difficult.

4. The Gulf of Guinea has flat swampy shores covered with dense forest; but, as this is largely due to the mud brought down by the Niger, there will probably be easy communication inland up the Niger. The Gulf is divided into two, as you can see, by the Niger Delta—the Bight (or 'Bend') of Benin and the Bight of Biafra.

5. The slight bend of the coast between Cape Lopez and Cape Frio is important, because the mighty Congo river empties through it, though there are few good harbours.

6. From Cape Frio, for about 1500 miles, the coast is almost harbourless, and has behind it



terraces of barren mountains, which are a terrible obstacle to communication inland. But there are two exceptions: one is the fine natural

harbour of Walfish Bay, and the other is the fine artificial harbour of Cape Town.

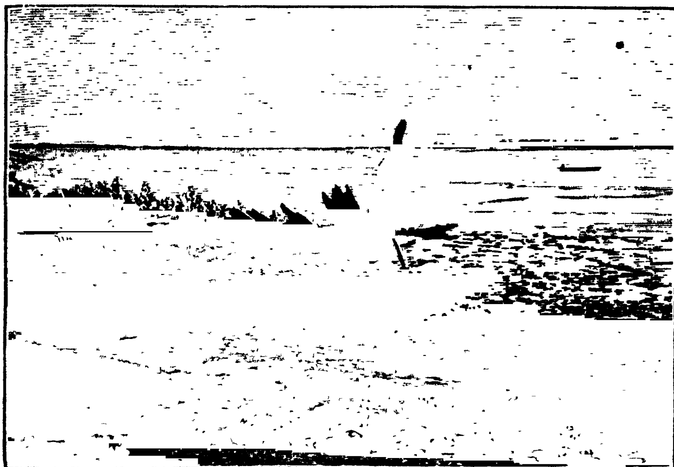
7. Although the continent seems to end southward in Cape Agulhas ('The Needle Cape'), it really goes on below the level of the ocean for some distance farther; and thus it forms the dangerous Agulhas Bank, which closely resembles in form the southern extremity of South America.

8. The *south* coast has, however, one good harbour in False Bay; but that is so near to Cape Town that it is not of much use. And eastward of Cape Agulhas there is not a single other good one, and even the roadsteads are not good roadsteads.

9. The *east* coast may be said to begin with the fairly good harbour of Algoa Bay, and resembles the west coast in several points. It is terribly deficient in good harbours, and much of its shore is desert; but Durban, like Cape Town, is a poor harbour much improved by a breakwater, and Delagoa Bay, like Walfish Bay, is a really fine natural harbour.

10. This east coast has also in the Zambesi an important, but unhealthy, river route into the interior of the continent; and, of course, the Mozambique Channel is sheltered by the great island of Madagascar, which measures more than 1000 miles from north to south.

11. Amongst the small islands off the east coast, one is very important—Zanzibar. It owes its importance to the fact that it commands the best routes inland into a comparatively narrow part of the Peninsula.



THE MOUTH OF THE ZAMBESI. Photo N P Edwards

12. Of course, the Gulf of Aden and the Red Sea are exceedingly important, because they are on the chief route between Europe and India; and you will notice that almost all the south coast of the Gulf of Aden is British, and even the island of Socotra, off the most easterly point of Africa—Cape Guardafui.

13. The Red Sea is one of the hottest places on the earth, and its shores are very deficient in

harbours; but Massowah (Massawa), and Suakin are places of great importance, and the Suez Canal is, for its size, the most valuable piece of artificial water in the world.

14. Even the *north* coast is typical of Africa, though it has an exceptionally good climate. The great Nile gives access inland; a large part of the coast is desert, including that round the longest gulfs—those of Sidra and Gabes; and the rest of the coast rises in terraces to barren mountains, with one fine natural harbour in the Bay of Algiers.

15. You will have noticed how little there is to say in favour of this African coast compared with the coasts of other continents; but it has one great advantage—it is never, like so much of the American and Asiatic coast, blocked by ice anywhere!

Surface.

1. If you compare Africa with the other continents on a map, probably the first thing that you will notice will be its large size; and, if your map is coloured or shaded to show the physical features—that is, practically, the height of the land above the level of the sea—you will notice also how much of the continent is very high.

2. First, let us look at the *size*. It is three times as large as Europe; or, to put it in

another way, it is larger than all the rest of the Southern Hemisphere, *i.e.* Australia and South



America, taken together. Or, if we compare Africa alone with the whole world, we may say that about one-quarter of the world is dry land,

and that nearly one-quarter of that dry land will be found in Africa.

3. Then, let us look at the *height*. There are two things to notice about it: one is the large proportion of the continent that is more than 3000 feet above the sea, *i.e.* higher than any mountain in England; the other is that no mountain is very high. Mt. Kilimanjaro is certainly 19,000 feet, but that is lower than the highest peaks of the Rocky Mountains—much lower than the highest peaks of the Andes, and very much lower than the highest peaks of the Himalayas.

4. All the south of Africa is high wide tableland—generally called the Great Plateau—which is on the average three-quarters of a mile above the sea. The peculiar feature of it is that it rises in regular steps from the sea-coast, each step forming a long but rather narrow terrace, which, from below, looks like a line of mountains.

5. Towards the north this high tableland sinks to another which is about one-third of the height, and which may be marked off on the map fairly well by a line drawn from the mouth of the Niger to the harbour of Suakin, on the Red Sea.

6. The highest part of the Great Plateau is on

the east side, and the north-east is higher than the south-east. This eastern portion may be roughly divided into three parts—the mountainous 'island' of Abyssinia, which forms the broadest part of it; the narrower ridge from which the fine peaks of Kenia and Kilimanjaro shoot up; and the part south of the Zambesi, where the main feature is the line of the Drakenberg Mountains.

7. The larger *rivers* of Africa are exceedingly important, especially with regard to the division of the continent into definite natural areas; and the Zambesi, though comparatively small, is a typical African river.

8. It rises in a little lake, called Dilolo, nearer the west coast than the east; and, if you cannot find its name on that part of your map, it is because this upper stretch of the river is generally called the Liba.

9. Its most wonderful feature is that of the Victoria Falls. The river just above the Falls is more than half a mile wide, and it suddenly disappears into a narrow crack *not 100 yards* wide. This is not all. At the bottom of the crack, which is about 100 feet deep, the huge mass of water is suddenly squashed into a long cutting *only 20 yards* wide, down which it goes tumbling and boiling in the most extraordinary

manner. It is no wonder that the natives have named it "The Thunder Smoke."

10. The lower part of the river is important, because it receives from Lake Nyassa a large



VICTORIA FALLS. RIVER ZAMBESI.

tributary called the Shiré, with which it combines to form a fertile but unhealthy delta, or three-cornered piece of land at its mouth.

11. The southern division of the Great Plateau has a gradual slope from the Drakenberg Mountains to a large area of 'inland drainage'—that is an area the rivers of which do not reach the sea—called the Kalahari

Desert; and the dry heat has the effect of converting any water that does collect into a salt lake such as Lake Ngami.

12. Of course the largest rivers of this inland district, such as the Limpopo and the Orange—



LAKE TANGANYIKA.

with its famous tributary the Vaal—have enough water to enable them to force their way to the sea.

13. In the extreme south, one of the terraces of this Great Plateau is particularly important. It is called the Great Karroo, and is one of the most famous areas of sheep-pasture in the world.

14. The middle division of the Great Plateau contains the great African fresh-water lakes, which rank next to those of North America in size and in importance; and you will notice that they are of two shapes—one being long and narrow, while the other is round or square.

15. Lake Nyassa is about 300 miles long and Lake Tanganyika is about 400; and the latter is rather higher than the former. As we saw just now, Lake Nyassa always overflows into the Zambesi by the Shiré, and Lake Tanganyika sometimes overflows into the Congo.

16. Higher again and larger is the great round lake of the Victoria Nyanza, which Dr. Livingstone—its discoverer—named after Queen Victoria. It is the largest fresh-water lake in the world except Lake Superior, and it overflows into the Nile—the longest river in the world except the Mississippi.

17. The smaller lakes in the same neighbourhood—which is actually on the equator—also help to feed the Nile, especially the Albert Edward Nyanza and the Albert Nyanza; but they are much less important than the great Victoria Nyanza.

18. Just west of this lake district there probably used to be a much larger lake, which we might call the Congo Lake; but it long ago

became so large that it broke through the low western edge of the plateau, and nothing is now left of it except the Congo river.



DR. LIVINGSTONE.

19. This old lake now forms the basin of the Congo—that is, all the land drained by the Congo and its tributaries—and is cut off from Lake Nyassa by the Lokinga Mountains, between which and the Bangweolo Lake Dr. Livingstone died.

20. The Congo rises in this lake, and makes a *magnificent course in the shape of a semi-circle*, crossing the equator twice, just as the Limpopo crosses the Tropic of Capricorn twice.

21. Like the Zambesi, the Congo is broken by falls or rapids. The Stanley Falls, like Stanley Pool, take their name from the great explorer, Mr. Stanley; and he gave the name of Dr. Livingstone to the long line of rapids down which the river rushes—for nearly 100 miles—into the Atlantic Ocean.

22. We have already seen that the Great Plateau sinks towards the north from about three-quarters to one-quarter of a mile in height; and, as the Nile flows northward—down this edge, it, too, must be much broken by falls and rapids.

23. Like the other great rivers of Africa, it flows from lakes, and this is why it is at first called the White (or 'Clear') Nile—for it deposits all its mud in the quiet waters of the lakes, and so is particularly clear.

24. As it flows along, it receives—at Khartum (Khartoum)—from the mountains of Abyssinia a rapid river which comes through no lakes, and which brings down so much mud that it is known as the Blue (or 'Muddy') Nile.

25. After the junction of these two great rivers, the united Nile begins to run down a



NILE CATARACTS.

series of rapids, known as Cataracts ; and between the sixth and fifth cataracts—counting from the Mediterranean—another tributary joins the river

from the Abyssinian mountains, the Atbara, on the banks of which a famous battle was fought.

26. After passing the Fifth Cataract, near Berber, the river leaves the fertile Sudan (Soudan), and flows through a very narrow flat valley, the sides of which are steep walls of rock, with desert behind them on each side—the Libyan Desert and the Nubian Desert.

27. After passing the First Cataract, near the Tropic of Cancer, the river forms a huge delta, or three-cornered peninsula, at its mouth. The name *delta* is derived from the name of the Greek *D*, which has the same shape—Δ.

28. You probably know that the Nile floods every year; and when the flood subsides, it leaves behind it a thick layer of rich mud along each side of the river. The flood is caused by the heavy rains in autumn on the mountains of Abyssinia, and therefore nearly all the flood-water is brought into the main stream by the Blue Nile and the Atbara.

29. The Libyan Desert is really part of the great Sahara, but has a sort of natural boundary on the west in the Tibesti Mountains; and on the southern edge of the Sahara there is a very important area of inland drainage (see § 11, p. 10) called the basin of Lake Chad or Tsad (Tchad). One of the rivers which feeds it, the Shari, is quite a

large stream in the rainy season, when the lake swells out to twice its usual size.

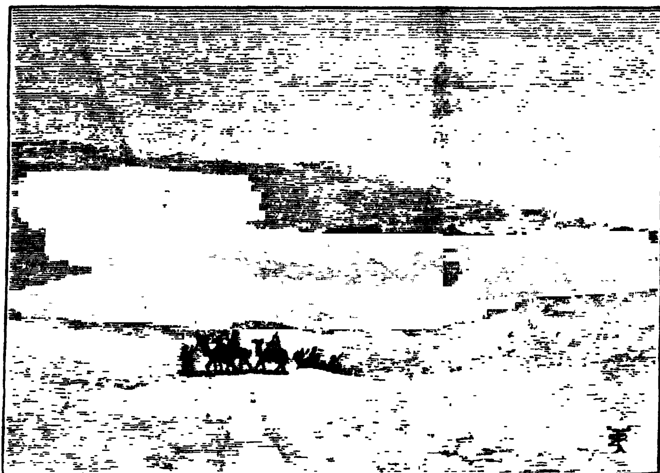
30. Along the south-western edge of the Sahara, you will see on old maps some so-called Kong Mountains. There are really no mountains there at all, but from the coast the edge of the Saharan tableland does look like a range of low mountains. This edge of the tableland gets a great deal of rain off the warm waters of the Gulf of Guinea, and therefore forms an important watershed. Some of the rivers flow rapidly down its southern slope into the Atlantic across the narrow lowlands of what is called Upper Guinea; others flow gently inland.

31. By far the most important of the rivers which flow northward and inland is the Niger. Like most of the other great rivers of Africa, it describes a wide curve, the centre of the curve being just about the longitude of London. When the Benué joins the Niger from the east, the combined waters are strong enough to force their way out to the ocean through the high edge of the tableland.

32. The Sahara is the largest desert in the world; and, though it is dotted with oases round its numerous wells and springs, most of it forms a 'sea of sand,' with ranges of hills and low mountains running across it. Once upon a time it

seems to have been much better watered than it is now, for the slopes of these hills and mountains are still ploughed up by the valleys of old rivers.

33. The entire absence of rain in most parts of the Sahara makes the air exceedingly dry; and



THE SAHARA DESERT.

this dryness causes great extremes of heat and cold from day to night, and these extremes split up the rocks into millions of tiny pieces—thus converting the land into a 'sea of sand.' Where-ever water is found, however—as on the oases—the soil will grow all kinds of splendid crops.

34. One reason for the terrible lack of rain in the north-west of the Sahara is the obstacles

presented to any wet winds from the north-west by the long double range of the Atlas Mountains. The range is about 1400 miles long, and rises to a height of about two miles; so that it is a very formidable obstacle. Between its two lines of heights there is a narrow valley where the air is so dry that it is covered with salt marshes—called shotts—in which the various streams from the snow-covered peaks disappear.

Climate.

1. The climate of any country depends mainly on heat and moisture. The heat depends mainly on the height about the sea—altitude, and the distance from the equator—latitude; and the moisture depends mainly on the distance from the ocean, and the direction of the prevailing wind.

2. A small flat country, such as Belgium, will have very little variety of climate; a huge continent with great differences of height and latitude, *e.g.* Africa, will have very great variety. A country which is much influenced by the ocean, as Madeira, is said to have a 'marine' climate; a country which is too large to feel the influence of the ocean except round the coast, *e.g.* the Sahara, or which does not approach the ocean at all, *e.g.* Rhodesia, is said to have a 'continental' climate.

3. Naturally, therefore, owing to the great size and the low level of the northern half of the continent, there is very little rain there; and, as it is also one of the hottest regions on the face of the earth, most of the land is desert. In the extreme corners of the region, however—in the Atlas Mountains, in Upper Guinea, and in Abyssinia—there are heavy rains in summer or autumn.

4. The southern half of the continent is so much narrower and higher that you would expect it to be much better watered on the whole; and so it is—inside the Tropics. The Great Plateau is well watered almost everywhere, but especially in the neighbourhood of the Great Lakes and in the basin of the Congo. Indeed it is so well watered that its lower areas are generally covered with thick forest: the higher and drier parts have clumps of trees, and are therefore often called park-land.

5. Along the Tropic of Capricorn there is a saucer-shaped hollow, in the middle of which is the salt lake, Ngami, in which the numerous rivers of 'inland drainage' disappear. The surrounding land is, like the Sahara, dry enough and hot enough to be desert, and is called the Kalahari Desert; but the country is comparatively narrow there, and so the Kalahari Desert is much smaller than the Sahara.

6. In the extreme north and the extreme south—especially in Algiers and Cape Colony—the height, the latitude, and the absence of east winds combine to produce a lovely climate—sunny and temperate—which is very beneficial to invalids, especially to those with weak lungs.

7. In the east and west of the continent the low tropical coastlands are so hot and so damp that they are exceedingly unhealthy, especially for White men; but the damp heat makes the vegetation most luxuriant.

People.

1. In olden days, when there were no railways or steamers or any safe and easy means of travelling and carrying goods about, men lived more or less where they were born, and had to be content with what their native place could supply. Consequently, wherever there was very little food, there were very few people, and wherever food was abundant, people crowded to it.

2. In most parts of Africa, however, the supply of food was not very great. The dry parts were too dry to grow any very valuable food plants, and the damp parts were covered with tropical jungle. In the dry healthy parts, therefore, the population was very scanty; and

in the damp unhealthy parts only the lowest type of men could live. Indeed, it has been



GORILLAS.

said that Africa is the home of the most man-like monkeys (the gorilla and the chimpanzee) and the most monkey-like men.

3. In a continent so backward as Africa it is

difficult to make a fair estimate of the number of people, but there are probably not as many in the whole of Africa as in the single country of India; and they are practically divided into two races—the Black and the White.



MAN OF FEZZAN.

4. The White men are, however, of three kinds. Some of the White men who live in the northern half, the Arabs and Moors, belong to what is called the Semitic group, and speak the same kind of language as the Jews; while others, the true natives, *e.g.* the Berbers, belong to what is called the Hamitic group, being very dark in

complexion, but without woolly hair and thick lips.

5. The third kind of White men represents the immigrants from Europe or the descendants of such immigrants. The British element is strongest in the south and east, the French in the north and west; but Britain also controls Egypt, and the French have a large tract of land near the mouth of the Congo. Germany and Portugal have large possessions on each side of the peninsula; Italy has some important possessions near the entrance to the Red Sea, and Turkey controls Tripoli.



BUSHWOMAN.

6. Besides these large areas directly under European Powers, there is the huge Congo Free State, of which the King of the Belgians is head; and Britain, France, Spain, and Portugal own important islands round the coast.

7. The Black men or Negroes are also of three kinds. The true Negroes have their home between the northern and the southern plateaus, especially in the area between the Niger and the Congo; they still are cannibals in some parts, and practise horrible rites, with all kinds of

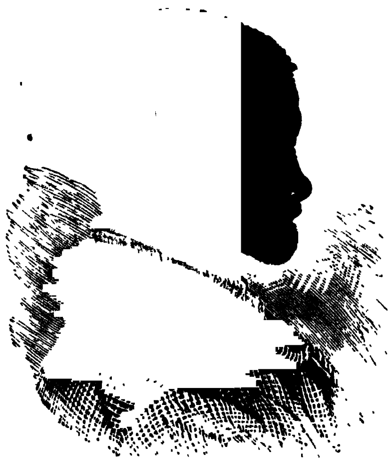


BUSHMAN.

cruel sacrifices, but are gradually being converted to the religion of Muhammed.

8. Most of the people who live on the Great Plateau, belong to what is called the Bantu group. They are not nearly so black as the true Negroes, and are much taller and more handsome; and the finest of them, the Zulus, make magnificent soldiers.

9. In the south-west there is a yellowy-black group called Hottentots, who are greatly inferior in every way to the browny-black Zulus; and amongst them there are to be found little collections of dwarfish Bushmen. In the forests there are also still smaller dwarfs called Akkas, who represent the very lowest type of man on the continent.



AN ELDERLY HOTTENTOT.

10. A rough comparison of the various definite political divisions will give a fair idea of the comparative importance. Much the largest single area is the Congo Free State, which is nearly ten times the size of the United Kingdom, or two-thirds the size of India; and the French colonies are altogether about half the size of India.

PART II. THE COUNTRIES.

THE BARBARY STATES.

1. The 'Barbary States' is the general name given to several distinct territories, all of which lie along the Mediterranean coast of Africa. A large part of this area was originally included in the old Carthaginian empire, and came into the power of the Romans when they conquered Carthage.

2. The native people belong to the Hamitic group, and are called Berbers, and their land was known as Barbary or Mauritania; but it has now been divided into the French provinces of Algiers and Tunis, the Turkish dependency of Tripoli, and the independent state of Marocco.

3. MAROCCO (Morocco) contains two very different kinds of land—the heights and slopes of the Atlas Mountains facing the Atlantic, and a strip of desert facing the Sahara. The two chief towns, Fez and Marocco—between which the emperor makes a grand procession every year—

are on the leeward slope of the mountains. With the snow-clad peaks behind them, and their mosques and minarets they *look* very beautiful from a short distance away; but inside they are ruinous and vilely dirty.

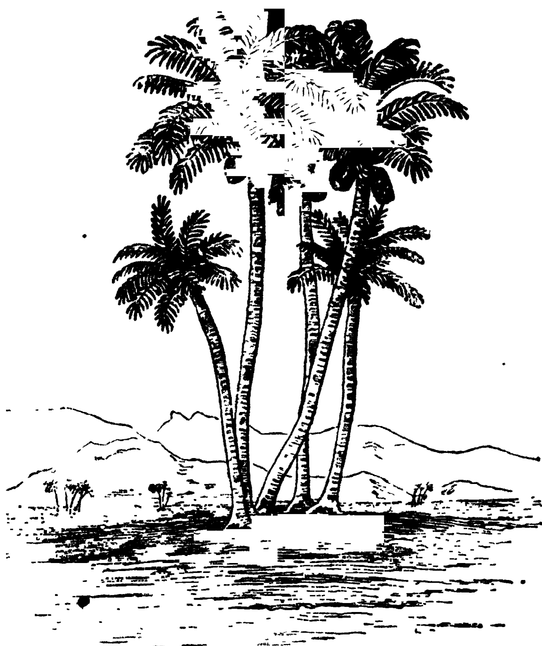
4. Fez is famous for all kinds of 'Marocco' leather and cloth, especially the red 'Fez' caps; and the trade is largely in the hands of Jews. But in Fez, as in the other cities of Marocco, the Jews have a separate quarter of the city, walled off, so that they may not defile the 'True Believers.' Most of the trade is done by camel caravans, which ply across the Atlas between the harbour of Tangier and the date-growing oasis of Tafilit.

5. The single fortress of Ceuta, and the strip of coast opposite the Spanish possessions of the Canary Islands, belong to Spain; and Spanish influence is very strong in Marocco, but the French are encroaching on the country from the landward side.

6. Algeria, under French Government, has become much the most important part of the Barbary States. Its position for trade by sea is so good that in old days the town of Algiers was a nest of pirates, ruled by a Turkish Dey, who was able to control more or less the Mediterranean trade, and whose daring raids provided him with

hundreds of European Christians, whom he kept as slaves.

7. The country has three distinct natural



DATE PALM.

areas. The first is the north slope of the Atlas Mountains, which is so fertile and so well watered that nearly all the population of the country is to be found there; it is called the Tell.

8. The second is the high flat top of the double range and the slight depression in the middle. It has enough rain from the Mediterranean to have some good pasture, and to grow Esparto grass, but it has a typical series of salt marshes or shotts.

9. The third is the low edge of the Sahara, which is, of course, barren, except the oases. There are, however, many 'artificial' oases—that is, places made fertile by the digging of artesian wells; and on these it is possible to grow magnificent crops of all kinds.

10. As you might expect, the western part—Oran—is largely peopled by Spanish colonists, and the protectorate of Tunis is largely Turkish in composition; but the whole area is definitely French, and part of it is formed into Republican 'Departments.'

11. Algiers, the capital, has a fine harbour sheltered by a line of islands; and from it railways run westward to the old port of Oran, which is so safe for small ships that the Romans used to call it the "Heavenly Harbour," and eastward to Tunis, near the ruins of Carthage.

12. Between Algiers and Tunis there is one of the most remarkable cities in existence—Constantine, a fortified city perched up on the top of a huge flat piece of rock, the sides of which

are so steep that they look like walls. And



A STREET IN CONSTANTINE.

between Constantine and Tunis there is a branch line to the old port of Bona.

13. From a glance at the map, you might expect TRIPOLI to be a country with great opportunities for trade; but its coast, though so long, is made very dangerous by the absence of harbours and the presence of a constantly raging



surf. Tripoli, the capital, is only a shallow roadstead.

14. Perhaps you know that a crescent is an emblem of the Turks; and, if so, you will not be surprised to hear that Tunis is built in the shape of a crescent, and has hosts of mosques and minarets, the white stone of which shines very brightly in the constant sunshine.

15. There are no real rivers in Tripoli, not even from the plateau of Barka; and most of the land, especially in the province of Fezzan, is barren desert. It is important, however, because it is on the shortest route between the centre of the Sahara and the Mediterranean; and some of the towns on the oases are busy caravan junctions, especially Murzuk.

16. These caravans are sometimes very large, as many as 3000 camels travelling one after another in single file; and the heat and dryness are so great that no animal except a camel could do the work. The heat is so great that it is sometimes possible to cook eggs by simply burying them in the sand; and the dryness is so great that the sand is exceedingly loose, and very easily caught up and carried along in the dreaded simoons.

EGYPT.

1. EGYPT really extends from Tripoli to the peninsula of Sinai, so famous in the history of the Jews; but the Nile valley is so overwhelmingly important that the country has been called "The gift of the River."

2. It is one of the most ancient countries in the world, for its advantages were so great that it became civilised in very early times. In fact,

a considerable part of European civilisation, including the alphabet, came from Egypt.

3. For the same reason, it has had a stirring history, and in its dry air many of its oldest buildings have been preserved for centuries. From the carvings in these buildings we can see that the people are still of the same race, with the same kind of features, as 5000 years ago; but the country has passed under many rulers since the days of the great Pharaohs.

4. After being conquered by the Greeks, it was conquered by the Romans; and, as the Romans afterwards conquered all the best parts of Europe, they carried to all parts of their mighty empire the civilisation which they borrowed from Egypt.

5. The chief reason for the decay of Egypt was that it was conquered by the Turks, whose rule—or misrule—has been a terrible curse to some of the most fertile parts of the earth: but now that the Turkish ruler, the Khedive, has freed himself from the Sultan, and the country is practically under British government, the old prosperity is fast returning.

6. The natural area of Egypt is the lower basin of the Nile, which may be divided into two parts—the delta and the narrow valley, which is seldom more than ten miles wide and sometimes not two. On each side of this valley the abrupt

hills which shut it in, break at once on to the desert.

7. The delta, of course, has been actually made by the river, and is one great 'Gift of the River'; but, as rain seldom falls in the Nile valley, the water itself is another great 'Gift;' and the whole prosperity of the land depends on the yearly floods.

8. As the country is so dry, you will not expect to find any forests; and, as a matter of fact, timber is so rare and so precious that the river boats are sometimes decked with sun-dried clay bricks instead of boards. But wherever the floods can reach, sun-loving plants, such as cotton, beans, and wheat, grow to perfection.

9. Besides the mud and the water, the Nile, of course, provides transport; but, as there are some curious curves in its course, several important pieces of railway have been built to cut off the corners. The railway is more expensive for goods than the river, as a rule; but in winter, when there is often a strong wind from the south, it is difficult for the ordinary boats to sail up-stream.

10. Perhaps your map may make you think that the Nile has a great many mouths, but only two of these are any use—the Rosetta mouth in the west, and the Damietta mouth in the east.

All the rest flow into shallow lagoons, and do not admit ships, although rich crops grow along their banks.

11. In order to improve the irrigation of the delta—that is, the means for watering the fertile fields—a great dam was built across the mouth of the valley; and a similar dam has just been constructed at Assouan to do the same for the irrigation of the valley lands.

12. The town of Rosetta, from which the western mouth of the Nile takes its name, is just on the eastern edge of the famous Aboukir Bay, where Nelson destroyed the French fleet in 1798; and Alexandria, the chief seaport of Egypt, is just on the western edge of the bay. As this city, which was named after Alexander the Great, has no direct river communication inland, it is a very important railway terminus; and the chief junction between Alexandria, Rosetta, and Cairo, on the one side, and Port Said, Ismailia, and Suez, on the other side, is close to the famous battlefield of Tel-el-Kebir.

13. Cairo, the capital, marks the end of the valley and the beginning of the delta, and so is able to control both areas. It is also the best centre from which to visit the wonderful ruins and monuments of Egypt. The Sphinx and the Pyramids are just opposite Cairo, and the ruins

of Memphis, Thebes, and Karnak are all between Cairo and Assouan, near the First Cataract.

14. This cataract is caused by a huge ridge of granite, which runs across the river-bed, and which has proved too hard for the river to wear



THE PYRAMIDS.

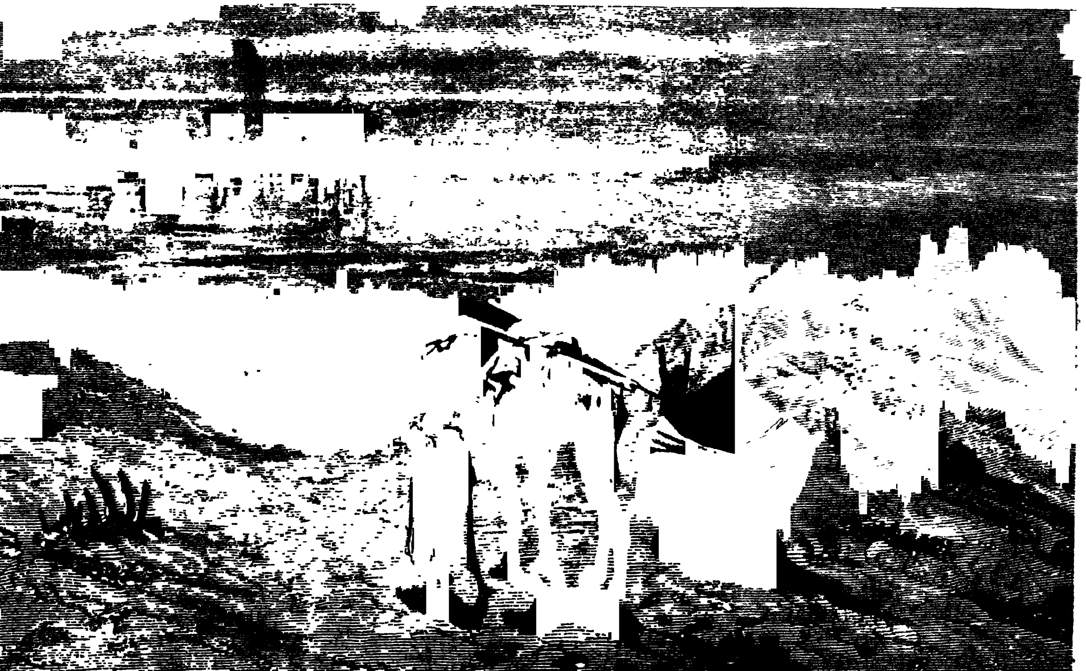
a deep channel through it. This granite forms part of a great deposit from which the Pharaohs got their blocks of stone for their magnificent buildings; and there are still some enormous blocks half-cut in the old, deserted quarries.

15. The Second Cataract is near an important railway centre, Wady-Halfa; and other important

towns are Siout, Abu Hammed, and Berber. Siout used to be the terminus of the railway, and so became a busy centre; a glance at the map will probably show you why the other two towns are important.

16. The Suez Canal, which is about 100 miles long, enables large steamers to pass from the Mediterranean to the Red Sea, and thus to save the long journey round the Cape of Good Hope on the route to India and China. As the canal is lit by powerful electric lights at night, and the steamers have electric lights of their own, they can pass through at any time of day or night. In the ordinary course of the canal there is not room for two large steamers to pass each other, but there are numerous 'bays' where this can be done.

17. The desert parts of Egypt are practically of no use, though there are a few oases even in the Libyan Desert; and they are more dangerous to cross than even the Sahara itself. It is said that the fatal 'mirage'—a deceptive appearance of water and trees—is more frequent and more vivid in the Libyan Desert than in any other part of the world; and, as the mirage is caused by heat, this may give you some idea of how terrific the heat is.



MIRAGE.

THE SUDAN.

1. The SUDAN, or Land of the Blacks, is the broad strip of land right across the continent on which the real Negroes live. It stretches from the Atlantic to the Nile valley, between the Sahara and the Great Plateau.

2. The EASTERN, or Egyptian, Sudan is a great natural centre of trade, its two most important points being Khartum (or Omdurman) and Fashoda. Khartum, as General Gordon realised, is specially important, because it commands both the White and the Blue Nile, and is the natural junction for trade between Suakin or Kassala on the one side, and the native states of Kordofan and Darfur, on the other side.

3. The WESTERN Sudan includes a number of native states between Lake Chad and the Guinea coast, most of which are under the control of France or Britain. The most important are the Bornu, Sokoto, and Hausa peoples; and there are similar peoples to the east of the lake, in Kanem, Bagermi, and Wadai.

4. Though the mass of the Sudan is divided between France and Britain, there are some small areas under neither of these Powers. Germany owns the little colony of Togoland and

the great Kamerun District; Portugal owns a strip of the Guinea coast, with a capital at Bissao; and Liberia is an independent state, with its capital at Monrovia.

5. The British Domain includes Gambia, Sierra Leone, the Gold Coast, and Lagos, which are colonies on the West Coast; and a vast tract of country covering the lower basin of the Niger, known as the *Niger Protectorate*, which is occupied by a Chartered British Trading Company. Most of the coast is low and swampy, and so unhealthy for Europeans that only the hardiest constitutions are able to withstand the scorching sun, the harmful vapours, and the pestilential air of these regions, even for a few years.

6. The most northerly of the colonies is Gambia, which lies in the basin of the river of that name. Bathurst, the capital, stands on the bank of this navigable stream, not far from its mouth. There, as elsewhere in the chief towns on this coast, a few European houses, with verandahs covered with luxuriant foliage, may be seen, surrounded by the miserable conical-shaped hovels in which the natives dwell.

7. Sierra Leone (Lion Hill), so called from a lion-shaped hill, has low-lying shores where the mangrove flourishes to perfection, behind which rises the forest-clad Kong tableland.

8. This colony, together with the adjoining country of Liberia, is the home of the freed slaves and their descendants, liberated through the instrumentality of England. The capital, happily called Freetown, stands at the mouth of the river after which the colony is named. The climate of Sierra Leone has the reputation of being the worst in the world. The yellow fever has a permanent habitation there, and the place is known as "The White Man's Grave."

9. The Gold Coast receives its name from the quantities of gold dust that were brought down from the interior for shipment. On a granite rock, whose base is washed by the shallow sea, stands a fortress, behind which lies the capital, Cape Coast Castle. The chief thoroughfare of the town is a shady arcade formed by an avenue of trees, which, joining their branches overhead, shut out the fierce rays of the sun. To the north of this colony is the native state of Ashantee (Ashanti), controlled by Britain.

10. Lagos, which forms part of the Slave Coast, was formerly the most important centre of the slave traffic that now only belongs to the past. The colony is much the same in its chief characteristics as the others which have already been briefly described.

11. The Niger Protectorate. East of Lagos,

the Niger River, through a multitude of channels, pours its waters into the sea, which is here covered with decaying vegetable matter that



BEACH ON THE GOLD COAST.

clings to the shores. The delta is a mass of slimy mud.

12. But, fortunately, it is only the delta of this great stream that is the home of poison and

disease, for beyond the limits of its channelled network the river widens and its banks present a fairer scene, revealing palm trees in abundance, rich pasture lands, and cultivated fields. On the banks, too, are dotted here and there a palm-oil factory or a station of the Royal Niger Company who have undertaken to rule this immense Protectorate, which is likely to prove one of the most valuable areas in West Africa.

13. Beyond the British Dominion, and more than a thousand miles from the river's mouth, on the southern edge of the great desert, stands the once fair and proud city of Timbuctoo (Timbuktu), which many years ago was considered one of the wonders of the world. The two chief stations within the British territory are Lokoja and Rabba, near which Mungo Park died.

14. The FRENCH DOMINIONS include Senegambia, French Guinea, and the French Sudan proper. Senegambia includes the Senegal basin and part of the Gambia basin. The capital is St. Louis, at the mouth of the Senegal river, from which there is a railway to the much better harbour of Dakar, under the shelter of Cape Verde.

15. The 'French Sudan' is entirely inland, and has its capital at Kayes, Timbuctoo—as we

have seen--being much less important than it used to be; and French Guinea includes what is known as the Ivory Coast and the Dahomey part of the Slave Coast, though there are now neither elephants nor slave-hunters.

NORTH-EAST AFRICA.

1. North-East Africa may be roughly divided into two chief parts—Abyssinia and the Somali peninsula, or 'horn of Africa,' which should be compared with the 'horn of Brazil.'

2. The SOMALI peninsula is mainly important because of its occupation by European Powers in order to command the southern approach to the Red Sea and Suez Canal. Italy owns all the coast from the Equator up to Cape Guardafui as well as the valuable strip of Eritrea (Erythrea) on the Red Sea, with a good harbour at Massowah.

3. Britain and France practically divide the coast of the Gulf of Aden between them; the British part, with a fair harbour at Berbera, is the more important, and is guarded by the British Islands of Socotra and Perim to east and west.

4. ABYSSINIA is rather larger than the United Kingdom, and occupies the mountainous end of

the Great Plateau. The surface is very curious, as the terrific floods have caused the rivers to cut exceedingly deep valleys, just like the cañons of North America; and thus the country looks like a number of very high islands, with very steep sides and entirely cut off from one another.

5. Owing to the height, the climate—except, of course, down in the river gorges—is cool and mild, and the heavy rains in summer make the country very fertile. The land is mainly devoted to pasture, especially for cattle; and meat is often eaten raw, steaks being cut sometimes off a living animal!

6. The country is so much isolated from the rest of the world by its ring of mountains that, as you may infer from their method of getting food, the people are very uncivilised; and the chief value of the country is really as the source of the Blue Nile and the Atbara.

7. The religious capital is Gondar, a half-ruined town famous for its rubbish heaps; the political capital is Addis Abeba, in the basin of the Blue Nile; and the best known place is the fine fortress of Magdala, perched up on a crag 9000 feet high, which was captured by the British in 1867.

EAST AFRICA.

1. East Africa consists of the broad high tableland which forms part of the Great Plateau between Lake Rudolph and the Zambesi; and it, therefore, includes the highest peaks of the continent and the great fresh-water lakes.

2. The area is divided mainly between Germany and Britain, though it includes the MOZAMBIQUE province of Portuguese East Africa. The town of Mozambique is on an island, but the island shelters the harbour of Mosuril on the mainland, through which trade with the plateau is carried on.

3. The importance of the GERMAN EAST AFRICA is due mainly to the excellence of the old slave-tracks inland, especially the one from Bagamoyo to Ujiji, on Lake Tanganyika; and Dar-es-Salaam has an even better harbour than Bagamoyo.

4. North of German East Africa, extending to the Juba River, and stretching westward beyond Lake Victoria Nyanza, lies BRITISH EAST AFRICA, an immense plateau of long grassy slopes and forest land, teeming with the wild animals that are so numerous on this continent.

5. Rising from this tableland are two monster

mountain peaks. Kilimanjaro, 19,000 feet high, and Kenia, 18,000 feet high, the former two-headed, the latter on the equatorial line, are both crowned with eternal snow, which the natives imagine to be masses of glittering silver.

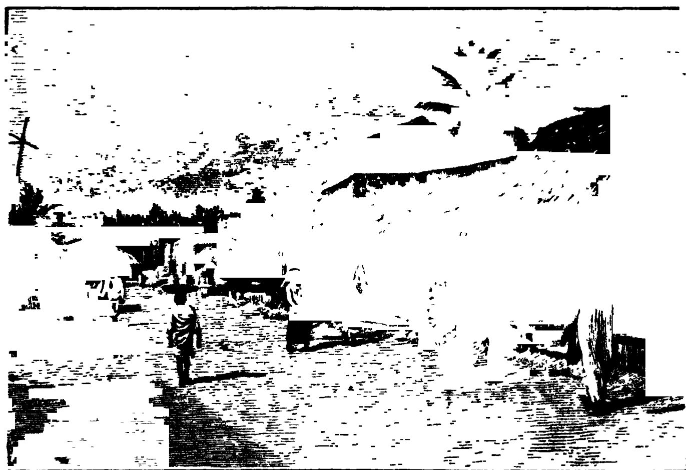


Photo N P Edwards

STREET IN DAR-ES-SALAAM.

From these peaks one can look down on the Indian Ocean to the east, and the Victoria Nyanza to the west, and view the fair country of fertile plain and lovely woodland laid out below.

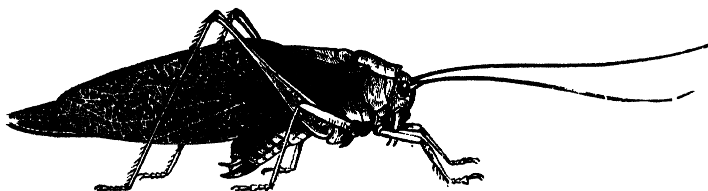
6. The well-built, dark-skinned natives, who dwell in bee-hive huts, are by no means savages of the rudest type, although a wrap of skin around their loins constitutes their only clothing.

They hunt, till the soil, and trade in ivory, cotton, spices, and gums with Arabs and Europeans, and particularly with the British East Africa Company, who govern the whole country. Most of the articles for exportation are carried down to Mombasa, where they are shipped to many parts of the world.

7. About sixty miles south of the Victoria Nyanza is Lake Nyassa, a sheet of water more than one half as long again as the river Thames, and twice the width of its mouth at Sheerness. It communicates with the Zambesi by means of the navigable Shiré River, which only offers one cascade obstruction in its whole length.

8. BRITISH CENTRAL AFRICA includes the country north of the Zambesi, and that east and south of the lake, known respectively as Zambesia and Nyassaland. Owing to the almost complete suppression of the slave trade, the progress of British Central Africa in a few years has been simply wonderful. Trade and population have enormously increased, steamers and boats have multiplied on the lakes, land under cultivation has extended, and whereas, a few years ago, an acre of land could be bought from ½d. to 1½d., it is now worth from one shilling to five shillings.

9. There are more than 5,000,000 coffee plants growing, all of them the offspring of one small ancestor sent from Edinburgh a few years ago. Orange and lemon trees and many other European plants have been introduced with success. The largest portion of the country is more than 3000 feet above the sea, and some parts of the tableland even range from 5000 to



10,000 feet. Zomba is the capital, but Blantyre is the best known town.

10. Locusts sometimes cause a famine in Central Africa. The hosts in their flight will darken the sun, and they are so destructive that they will leave the country desolate for miles around. In the course of a few days they will devour the whole of the Indian corn in a large district, and leave nothing but stalks and bare fields behind.

11. UGANDA used to be under a very cruel Bantu king, and it will never be very healthy; but under British rule it is becoming prosperous,

and produces excellent coffee. It has a favourable position for trade, and only needs a railway down to the island harbour of Mombasa, the best harbour on the East African coast.

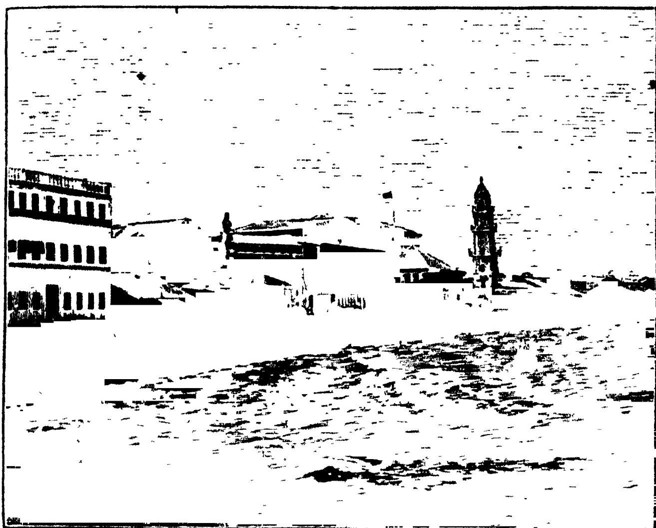


Photo. N. P. Edwards

12. The island harbour of ZANZIBAR is not nearly so good a harbour as Mombasa; but it became important in former times because it commanded the best slave-tracks into the interior, and it still retains much of its old importance. It is a station on the telegraph cable from Cape Colony to Europe, and so is very valuable to Britain.

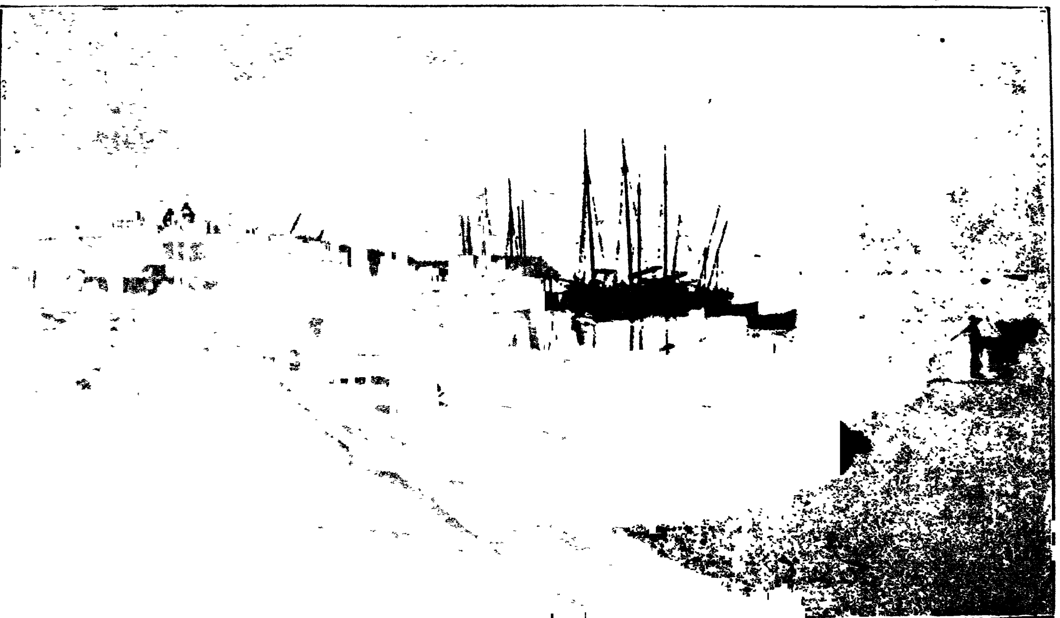
WEST CENTRAL AFRICA.

1. This area of the continent may be roughly divided under two heads—a narrow strip of coastland, generally called Lower Guinea, and the huge basin of the Congo.

2. The coastlands extend from the Old Calabar to the Kumene river, and include the GERMAN KAMERUN (Cameroon) district and the FRENCH CONGO. The German part is often called the Oil Rivers, because of the number of oil-palm trees which grow along the Old Calabar and Kamerun rivers. Victoria and Gabun Bay are the best harbours, and the trade includes the ivory and various forest products of the Adamawa highlands and the Ubangi valley.

3. The rest of the coastlands and the edge of the plateau behind them are occupied by the great Portuguese colony of ANGOLA. Its chief towns are harbours, such as (St. Paul de) Loanda. Benguela, and Mossamedes; but they are not nearly so important as they were in the old slave-trading days. Loanda has a railway inland, by which it exports the coffee of Ambaca, and is a station on the telegraph cable from Cape Colony to Europe.

4. The CONGO FREE STATE was founded in 1884, and is the largest definite political division



ST. PAUL DE LOANDA.

of Africa, being nearly 900,000 square miles in area. It has an exceedingly small piece of coast, however, as it has not acquired the little Portuguese possession of Cabinda or Portuguese Congo.

5. The basin of the great river is largely covered with forest, and all kinds of valuable tropical products grow in abundance, especially oil-palms and rubber-creepers; and, outside the actual forest area, such plants as coffee and bananas flourish to perfection.

6. As the country is a network of rivers, and is still very far from being developed, all the chief places are river-side stations or depots. The most important is the harbour of Leopoldville, on Stanley Pool; and the next in importance is Bangala, or New Antwerp. The capital, however, is the ocean harbour of Boma, and there is another harbour on the estuary of the river at Banana.

THE ZAMBESI REGION.

1. The Zambesi Region really includes British Central Africa, which is largely the basin of the Loangwa and Shiré tributaries of the Zambesi; but that area has been already treated, along with the Portuguese province of Mozambique.

2. The region referred to now includes the Portuguese province of Lorenzo Marques and the large British territory often called by the general name of Rhodesia.

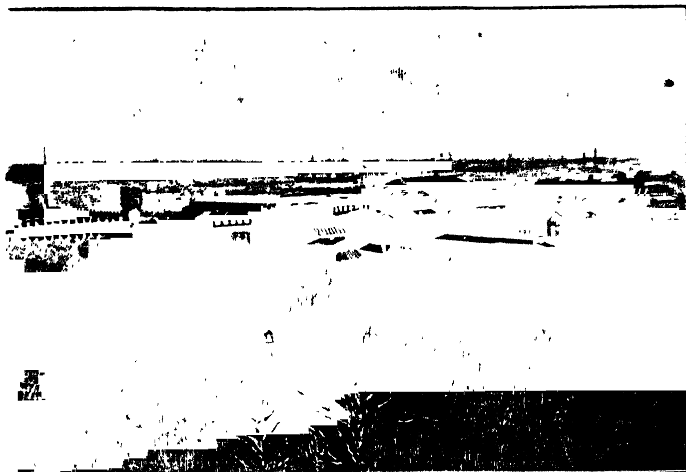


Photo N P Edwards

DELAGOA BAY.

3. LORENZO MARQUES takes its name from a very important town on the magnificent natural harbour of Delagoa Bay, which is the terminus of one of the most important railways in Africa, and has the easiest access to the Transvaal Colony. The province also contains another valuable little harbour at Beira, which has the easiest access to Mashonaland, up the Pungwe valley.

4. RHODESIA is not an official title, but has been applied to the district because of its connection with Mr. Rhodes; it is properly divided into two parts, Matabeleland and Mashonaland, which formed Southern Zambesia when British Central Africa was Northern Zambesia.

5. The importance of the area is very great because, owing to its height and its latitude, it is more suitable for colonisation by Europeans than any other equal area of tropical Africa. In addition to this, it is known to have great mineral wealth, especially in gold; and its soil and climate are very favourable to agriculture.

6. The surface is one continuous tableland, with the ridge of the Matoppo Hills running across it from the north-east to the south-west. The two boundaries, on the north and the south, are practically the Zambesi and the Limpopo rivers; Mashonaland occupies the north-east, and Matabeleland occupies the south-west.

7. Mashonaland is rather the more valuable in almost every way. It is rather higher, more fertile, and richer in gold; and its natives are more peaceful and industrious. The great political centres, Bulawayo and Salisbury, represent the two countries; the other towns, *e.g.* Tuli, Victoria, and Charter, represent gold-mines, but there is also gold round Salisbury and Bulawayo.

8. Between Matabeleland and the Kalahari Desert there is a part of the British Protectorate of Bechuanaland called Khama's Country. The capital is Palapye, and Kanya is a frontier

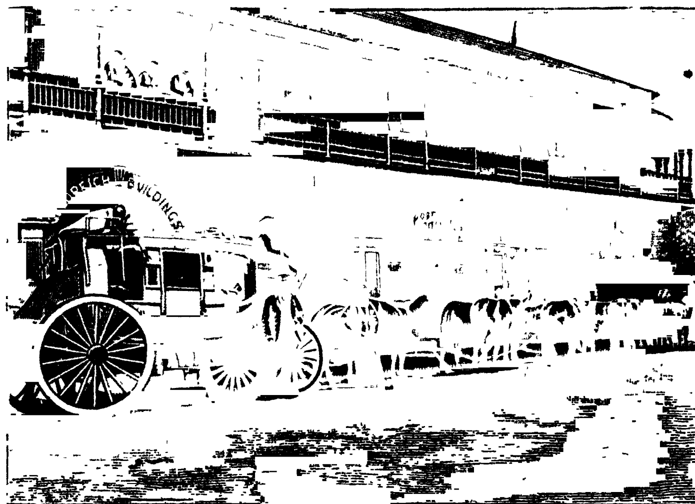


Photo. N. P. Edwards.

MAIL COACH.

market where the king sells the maize and other crops which he has been wise enough to grow for the miners.

9. British Bechuanaland is now part of Cape Colony, but it is more like the Protectorate than the Colony. The capital is Vryburg, but both Taungs and Mafeking are more important. Mafeking, which is the largest town, won a good

deal of attention as an important centre in the recent war.

10. GERMAN WEST AFRICA overlaps the Kalahari Desert on the one side as Bechuanaland does on the other, and the rainfall is too small everywhere for successful agriculture. The capital is Otyimbingue, which has a good central position on the best watercourse in the colony—that of the so-called Swakop river.

11. WALFISH BAY, which belongs to Britain, is, however, far more important than all the towns in the German Territory taken together. It has a very fine natural harbour, it commands all the good routes inland, and it is comparatively close to Vryburg and the Witwatersrand goldfield. It got its name from the whales which used to frequent the bay in the days when the Dutch first began to settle in South Africa.

SOUTH AFRICA.

1. There has been among European nations a scramble for land in Africa, which has not been always productive of kindly feeling. The French, Germans, Dutch, Belgians, Italians, Portuguese, as well as the English, have acquired large tracts of country in the Dark Continent, about one-

third of which either constitutes the colonies of Great Britain, or is under its protection.

2. The enterprising Dutch first acquired a footing at the Cape, and large numbers, in the course of a hundred years, emigrated from Holland to make the Colony their home. But the beginning of the last century saw England and Holland engaged in war, and the former's supremacy in arms enabled her to seize the colony, and retain possession of it.

3. The Hollanders had previously subdued the Hottentots and Bushmen, and made them their slaves. They had driven away the wild beasts from the settled parts, had built substantial houses, made roads and towns, ploughed the soil, and had established fruitful vineyards and handsome gardens, where figs, oranges, and pomegranates grew.

4. They did all that an industrious and determined people could do to make the land a prosperous and happy one, and then the English stepped in to take possession, and compelled the Dutch farmers, or Boers, to set their slaves free. This compulsory freeing of the slaves was just; but every Boer resented it. The more determined spirits resisted it, and were shot as rebels; while thousands of others, gathering up their household goods, and yoking their oxen to the

waggon, 'trekked' with their flocks and herds across the Orange River, and ultimately founded the Orange Free State, the Transvaal, and Natal.

5. In England it was represented that the Boers were persecuting and killing off the natives:



Photo N. P. Edwards

an English Army thereupon drove them out of Natal and invaded the Free State. Finally, treaties were made with the two Dutch states, and the Orange River was declared to be the boundary line of English authority. Peace reigned for seventeen years, until diamonds were discovered in Griqualand West, considered by the

Boers to be a part of the Free State Territory. There was every promise, afterwards fully realised, that this district would prove the richest diamond field in the world.

6. The Boers, under the assumption that they had robbed the Griqua chief of this territory, were driven out of it by the English, who took the lion's share of the land for themselves, and handed the remainder over to the native chieftain. Kimberley is now the centre of this diamond district, which has yielded vast quantities of precious stones, one called the "Star of South Africa" being valued at £11,000, and another at £60,000.

7. The arrival of the White man in South Africa in all probability saved the Hottentots and Bushmen from early extermination at the hands of the able-bodied, intelligent Kaffirs and Zulus. The dark-skinned races constitute the majority of the population, about one half of the Europeans being Dutch and the remainder mostly of British extraction. In the Cape Parliament the languages of Holland and England are both spoken, and all laws and official documents are printed in the two tongues.

8. Heathland is the prevailing feature of the landscape, the plant displaying its large spikes of white, pink, and crimson, which in the distance

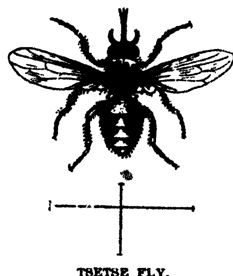
have the appearance of flowers. Most of the wild animals, abundant in number and variety, have



KAFFIRS.

been driven north of the Orange River, where the dwarfed Bushmen live, seeking shelter among bushes or dwelling in caves or mountain clefts.

9. On the other side of the great stream the lion and the leopard watch for their prey, and the antelope, the gazelle, and the buffalo roam over the sandy plain. The giraffe and the zebra also find a home there, with the terrible tse-tse fly, whose venomous bite means death to horses and cattle alike.



TSETSE FLY.

10. Ostriches in thousands once ran wild over the uplands and plains of the Cape, but few birds now remain in that state, for ostrich farming has assumed the proportions of a great industry, by which the animals are carefully reared for the sale of their fine feathers. The farms vary from a few to thousands of acres in extent, and are usually enclosed by a wire fencing.

11. The ostrich makes his nest by digging a hole in the sand, in which from fifteen to twenty eggs are laid. These are hatched either by the male and female bird sitting on them night and day respectively, or by means of an incubator in which an equable heat is maintained. The young birds hatched by the latter process are tenderly cared for by a native servant, generally a Hottentot, who gives them their recreation

and food by day, and provides them with shel tering warmth by night.

12. Those that are *naturally* hatched and reared by the parent birds run many risks, for

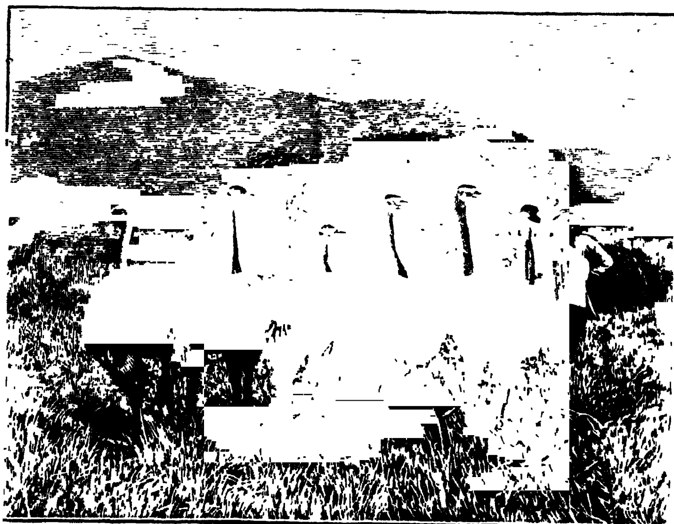


Photo. N. P. Edwards.

OSTRICHES.

the jackal, under cover of the darkness, will sometimes come down upon a whole brood and utterly destroy them; and the carrion crow has a great liking for the eggs, which he will consume when they are not carefully guarded.

13. A few years ago the market price of a pair of fine ostriches was about £300, but owing to

the fall in the value of the feathers, birds can now be purchased at a greatly reduced sum. In the breeding season the male ostrich is a most formidable creature, for he will attack anyone, friend or stranger, who attempts to approach his nest, or even enter on his feeding ground. On these occasions the attendants provide themselves with a thorn bush or a forked stick, the former being held before the bird's eyes on his near approach, and the latter holding him back by the neck.

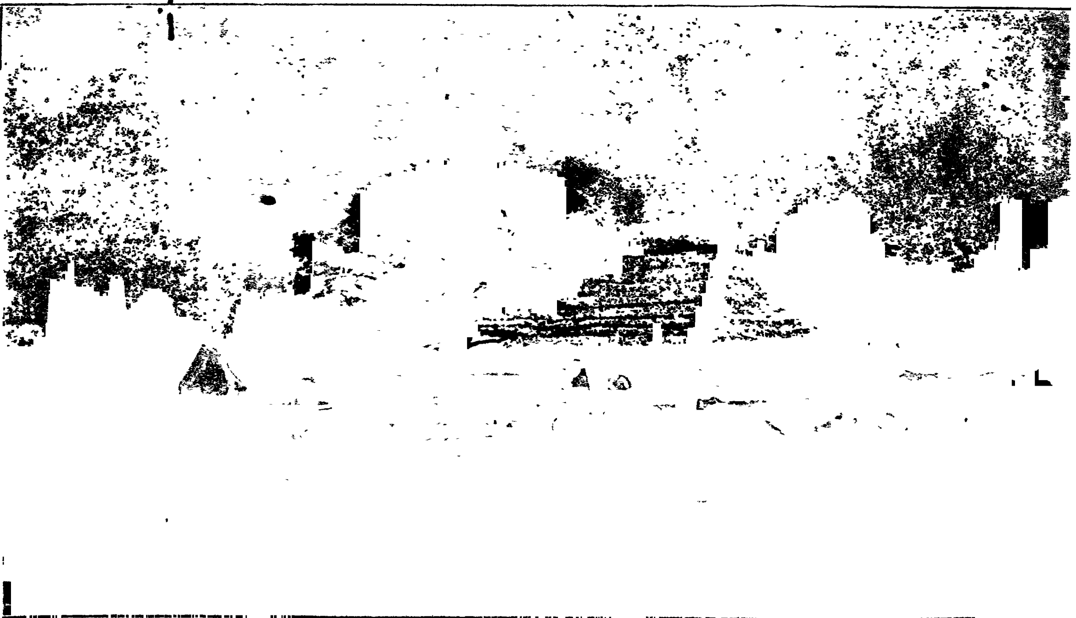
14. Both these methods stay his onward rush and bring him to a sudden standstill. Anyone who has felt the strength of his straight kick, has either not lived to tell the story or has luckily escaped with a broken limb. The fully-developed ostrich stands from seven to nine feet in height. With his sinewy, long, and featherless legs, aided by the flapping of his wings, he is able to travel at a great speed, faster even than the fleetest horse.

15. British South Africa includes the Cape Colony, Natal, Basutoland, Zululand, British Bechuanaland, Bechuanaland (a British Protectorate), the Orange River Colony, and the Transvaal; and to the north of the last-named country, stretching away to the Zambesi River, is the immense territory, including within its

limits Matabeleland and Mashonaland, which is under British influence, and is the sphere where the chartered South African Company carry on their trading operations. All these countries are peopled by the dark-skinned races, among whom, except at the Cape, in Natal, and the Transvaal and the Orange River Colonies, dwell a mere handful of Europeans, to preserve peace and order, and to lead them on to a more civilised mode of existence.

16. The town of Johannesburg has a remarkable history. In 1884 the site of this fine city, now the home of a large and busy population, and the largest town in South Africa, was little more than bare veldt. From its small proportions in 1886 it has grown to be one of the best-appointed towns in the world.

17. Standing on a plateau nearly 6000 feet above the level of the sea, connected with several railways thousands of miles in length, it has public parks and little spots of greenery fresh with the fragrance of lovely flowers, and most of the advantages which the resources of civilisation can bestow. Before the recent war it exported over twenty million ounces of gold in one year, and contained over 100,000 inhabitants.



IN MASHONALAND.

CAPE COLONY.

1. Cape Colony lies at the southern extremity of Africa, extending from the Atlantic to the Indian Ocean, and bounded on the north by the Orange River. From the southern coast the land rises by a series of tablelands, each fringed by a mountain-wall, to that snake-like range the Nieuwveld Mountains, which form the great watershed of the Colony, and constitute the northern boundary of the Karroo Desert. The desert is an immense plateau of red sand, covered by "karroo," "milk," and "mimosa" bushes and tufts of grass, that stretch away farther than the eye can reach, having for their background the mountains and the deep blue sky.

2. Months and months will roll by without rain falling on this desert upland. Then the river beds become waterless, the stunted "karroo" bush loses its foliage, the finger-like leaves of the milk bush shrivel up, and every vestige of grass disappears. The goats and the sheep move along languidly in search of food, and the fevered earth yearns for the rain that never seems to come.

3. Down in the valley are the white walls, quaint gables, and thatched roof of a Boer homestead, lying near some fickle stream; and

perhaps thirty or forty miles away is another Dutch habitation. These isolated dwellings are the only signs of man's presence in this inhospitable wilderness.

4. On the other side of the rugged peaks of

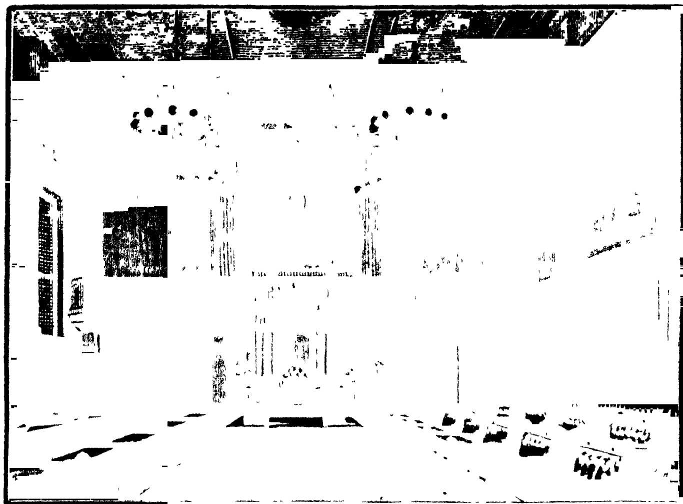


Photo N P Edwards.

HOUSE OF ASSEMBLY, CAPE TOWN.

the New Mountains the sandy ground slopes gradually away to the Orange River in a fine succession of grassy undulations, whose monotony is relieved by the occasional presence of scrub and stunted tree. On the gently-sloping plain may often be seen the lumbering, white-covered waggon of the burly Boer, drawn slowly

along by a score of yoked oxen headed always by a Kaffir.

5. The rivers of the Colony are of no commercial importance. The Orange River, a thousand miles long, is the largest, and even this is often a mere thread of a stream at certain seasons of the year, and its mouth is impassable to ships because of a formidable sand-bar, which the ocean currents have constructed from the material brought down by the river itself. Most of the other streams are comparatively short, and expose their beds to view during the greater part of the year; but when the rains fall, their channels are filled with foaming waters that hurry on in headlong fashion down to the sea.

6. No part of the world possesses a more delightful climate than South Africa. There are no great extremes of heat and cold as in Canada, or even as in England. The land may be said to enjoy a perpetual spring, for the summer heat, never excessive, only reigns for two or three months, and a chilly atmosphere, except in the mornings and evenings, is almost unknown. Sunshine and an intense blue sky are almost as "constant as the northern star," and the air of the uplands has a remarkable health-giving power fully appreciated by invalids with weak lungs.

7. Cape Town, the capital and largest city of the Colony, lies on the shores of Table Bay, overlooked by the pine-clad Table Mountain, the highest part of that little peninsula which terminates in the Cape of Good Hope, originally

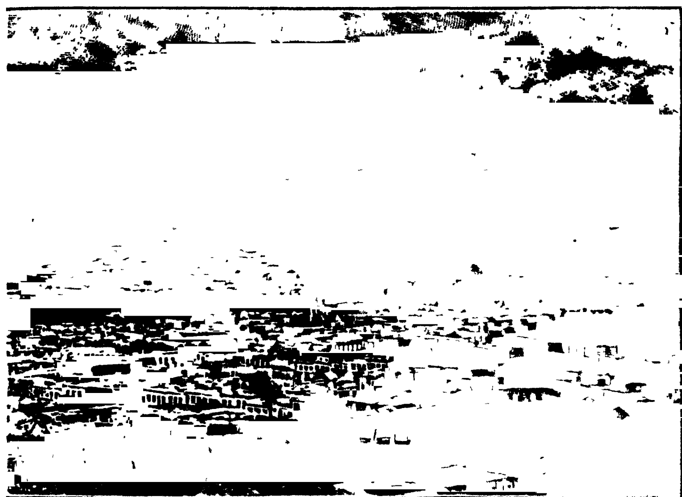


Photo. H. P. Edwards

CAPE TOWN.

named the Cape of Storms. The town's 85,000 inhabitants include English, Dutch, French, Germans, Kaffirs, Hottentots, Arabs, and Malays.

8. In its harbour, protected by an artificial breakwater, may always be seen many ships that fly the red ensign of the British Merchant Navy.

The city's chief thoroughfares are planted with trees, and flat topped houses and rectangular blocks of buildings combine eastern with western ideas.

9. Port Elizabeth, on Algoa Bay, is essentially English in character. It is one of the chief commercial towns of the Colony, and is largely engaged in the export of wool obtained from the millions of sheep which thrive in the interior, of which Graham's Town, about ninety miles inland, is the centre.

10. Graham's Town, surrounded by ostrich farms and rich pasture land, has a charming situation amongst grassy hills. The invalid may enjoy here a cool and invigorating climate, and sit in gardens where the orange tree grows. The clematis flourishes, and the fruit trees blossom to perfection. Through these towns pass the ostrich feathers, the hides, the diamonds, and the wool, which constitute the chief exports of the Cape.

11. Kimberley, named after the Colonial Secretary of that name, is the capital of the diamond district in Griqualand West. In 1867, when the precious stones were first discovered, the town was not in existence; it took a few years for the people to realise what an immense treasure-house was a hill of blue clay, at the foot

of which the town now stands. Kimberley has gradually developed into a city of substantial buildings with nearly 40,000 inhabitants. The annual output of its diamond mines is now equal to £4,000,000.



Photo N P Edwards.

TUGELA RIVER.

NATAL AND ZULULAND.

1. Natal, so named from its discovery by Vasco da Gama on Christmas day—Christ's 'Natal-Day'—lies north-east of Cape Colony, and is bounded on the north by the Tugela River, and on the west by the Orange River

and Transvaal Colonies. Although the country was discovered about four hundred years ago, it is only within comparatively recent times that permanent European settlement has been made.



THE HARBOUR, DURBAN. Photo N P Edwards

2. In 1824 a few Englishmen established a trading depot on the site where Durban now rears its wharves and its quays, but the war-like spirit of the natives soon compelled them to flee for their lives. Subsequently other and successful attempts were made to form a settlement; and, on the occasion of the great Dutch migration from the Cape, hundreds of Boers set up

their homesteads in Natal, and a few years later declared themselves an independent Republic.

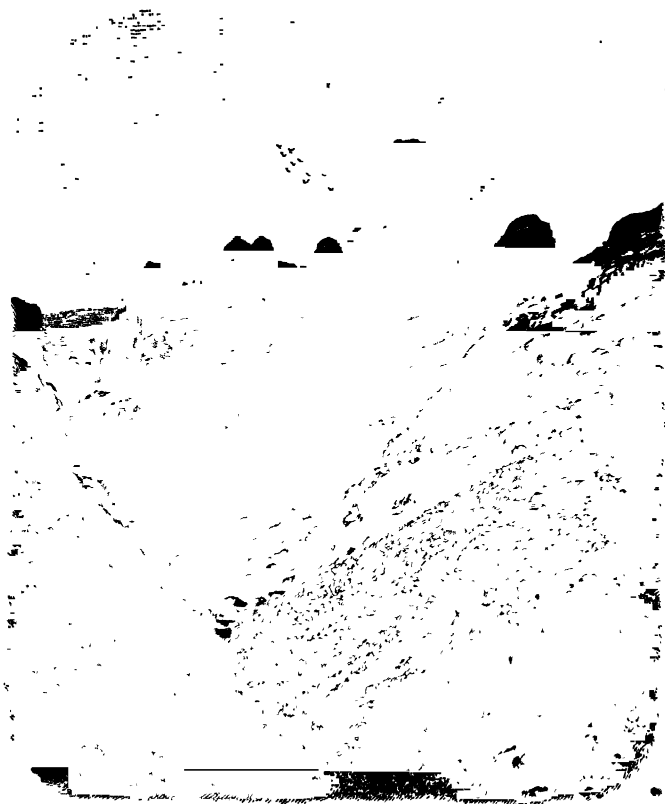
3. But troubles again ensued, and the country was then proclaimed British Territory under the government of the Cape, and was finally constituted a separate Colony in 1856.

4. From the lowlands of the coast, where the mangrove and mimosa flourish, and the picturesque sandstone cliffs look down on the waters of the Indian Ocean, the land rises gradually in a succession of terraces until it culminates in the mountain range that forms the Colony's western border—the Drakenberg.

5. On the belt of slightly elevated country that runs along the shore, cotton, sugar, coffee, indigo, and other tropical produce are grown, for there the soil is immensely rich, and there the greatest heat known to the Colony prevails. The second huge step in this monster staircase is practically treeless, but it possesses a light sandy and undulating soil, whereon bright green grasses grow to nourish the herds of cattle that are ever grazing there.

6. Then follows a terrace on which the orchid, the aloe, and the fern are abundant, to be again succeeded by the loftiest plateau of all, where a delightful climate reigns, and whereon almost every species of European produce will grow

luxuriantly. Natal is remarkably well watered, but its rivers are useless for navigation, for they



DRAKENBERG MOUNTAINS.

Photo N. P. Edwards

are mostly rapid streams, and all have sandbars at their mouths. Not many miles from Pieter-

maritzburg there is a magnificent waterfall, that has a descent of 360 feet.

7. The mouths of the rivers are infested with crocodiles. Snakes of many kinds are numerous. The cobra, unlike the rattlesnake, which gives warning of its approach, creeps on in stealthy silence, and before the victim is aware of its presence, will raise its awful crest and begin its deadly work.

8. For every White man that dwells in the Colony there are ten Kaffirs, or natives, who vary in colour from burnished copper to polished ebony. They are stalwart, muscular men, representing a branch of the Zulu race, with well-moulded, manly figures, who scarcely know what fatigue and exhaustion mean, notwithstanding the extraordinary efforts of which they have proved themselves capable.

9. Arrayed in ox or leopard skins, with a head-dress of feathers, ornaments of coral and metal, and bands of beads around neck and arms, the Kaffir becomes, with his shield, clubs, and assegai, the most formidable type of a savage warrior that can be imagined.

10. He is proud, brave, and determined, ever ready with his hospitable hand, and loves honesty, truthfulness, and justice. The race as a whole may be said to have taken to

agriculture, for their intelligence is so pronounced that they could not long fail to recognise the permanent advantages to be derived from agriculture.

11. Pietermaritzburg, the capital of Natal, lies among the uplands of the interior, about fifty miles from the coast, and is the centre of the great pastoral district. Its white-walled, red-roofed houses, with pretty gardens and well wooded streets, combined with its splendid situation, make it one of the most desirable residential towns in South Africa.

12. Durban, the largest town of the Colony and the chief seat of trade, stands on an inlet that is the only natural harbour for some hundreds of miles along the east coast.

13. Half of its 25,000 souls are Europeans, while the rest consist of Kaffirs, Hindoos, Malays, and Chinese. Durban is the chief outlet for the produce of the Colony, and one of the avenues through which the wool, feathers, and gold of the two inland Colonies have to pass. Near the junction of the extreme north of Natal with the Transvaal, stands the rugged Majuba Hill, on which the British troops were defeated by the Boers in 1881.

14. North-east of the Tugela River lies Zululand, a country similar in physical features and

natural productions to Natal. The Zulus are well-formed, muscular men, belonging to the same race as the Kaffirs, who formerly spent their whole time in hunting and war.



Photo. N P Edwards

MAJUBA HILL.

15. Armed with the assegai, which they can hurl with terrific force and unerring judgment, and accustomed to the most rigid military discipline, these nimble-footed, courageous warriors have been found to be no mean foe for British troops equipped with all the modern weapons of war.

16. Cetewayo, the last king of the Zulus, had, for a long time, been a standing menace to the

peace of Natal and the adjoining countries. Certain tribal customs which he enforced, such as not permitting any man to marry unless he had distinguished himself in war, were calculated to foster among his young subjects an intense desire for war.

17. The British Government recognised the danger of this custom, and called upon Cetewayo to abolish it. The king returned an evasive answer, and the British troops, under the command of Lord Chelmsford, were at once ordered to invade his country, with the purpose of breaking up the dangerous military organisation, of which he was the head.

18. Then followed the disaster of Isandula (1879), in which an overwhelming body of Zulus fell unexpectedly upon a wing of the invading army and utterly destroyed it; but at the same time the defence of Rorke's Drift, a provision depot on the Upper Tugela River, by Lieutenants Bromhead and Chard and eighty men of the 24th Regiment, helped to avenge the slaughter of Isandula.

19. A vast army of warriors attacked this place, and after fighting desperately for twelve hours, they fell back with the loss of over a thousand dead. After six months' struggle, Lord Chelmsford advanced upon Ulundi, the

capital, and, forming his troops into a square, awaited the onslaught of the enemy. They came on fearlessly, but the British breechloaders and the Gatling guns mowed them down like grass. The battle was fought and won in a



RORKE'S DRIFT.

few minutes, for the Zulus fled from the withering fire, and the war was at an end. The king was subsequently captured and sent a prisoner to the Cape.

20. The Zulus live in huts or kraals that resemble huge bee hives, with only one opening

for the exit of smoke and man. About thirty of these kraals constitute a village.

21. The Zulus are now developing a taste for agriculture, and there seems to be no reason why this intelligent race of men should not ultimately become peaceful and enterprising citizens of the British Empire.

AFRICAN ISLANDS.

1. MADAGASCAR is one of the largest islands in the world, measuring 1000 miles from north to south; but its population is said to be less than that of Ireland.

2. The island is very characteristic of Africa, for it consists mainly of a high tableland which falls in terraces to the coast. The fall on the east side is very steep, so that the rivers are useless for navigation; and, as most of the east coast is bordered by coral reefs, there are few good harbours.

3. The west coast fortunately is more or less free from coral, and is well sheltered by the island itself from the south-east gales, so that it is better supplied with harbours, Mojango being the best.

4. Most of the trade of the island, however,

goes through the eastern port of Tamatave, the nearest port to the native capital of Tananarivo (Antanarivo). In the meantime, the French, who have conquered the native Hovas, keep Tananarivo as their capital; but it is a very awkward place for the capital of a modern civilised people.

5. Of the other islands in the Pacific, the sugar-growing island of REUNION, or Bourbon, belongs to France; and the French used to own MAURITIUS, or the Isle of France. But now Mauritius itself and the rest of the Mascarenes belong to Britain, though the French language is usually spoken by the inhabitants. The capital has the characteristically French name of St. Louis.

6. The very beautiful archipelago of the SEYCHELLES, which is under the same government as the Mascarenes, is famous for growing a large double coco-nut, which is not found anywhere else in the world.

7. ST. HELENA and ASCENSION belong to Britain, and are coaling-stations for vessels going round the Cape of Good Hope; but they are not nearly so important as they were before the Suez Canal was opened. St. Helena became famous as the place to which Napoleon was banished after his defeat by Wellington at Waterloo.

8. The African islands in the North Atlantic used also to be much more important than they are now, especially in the early days of exploring the Atlantic Ocean. Indeed, the CAPE VERDE group are now almost useless, because they are so near the Sahara that they suffer from drought.

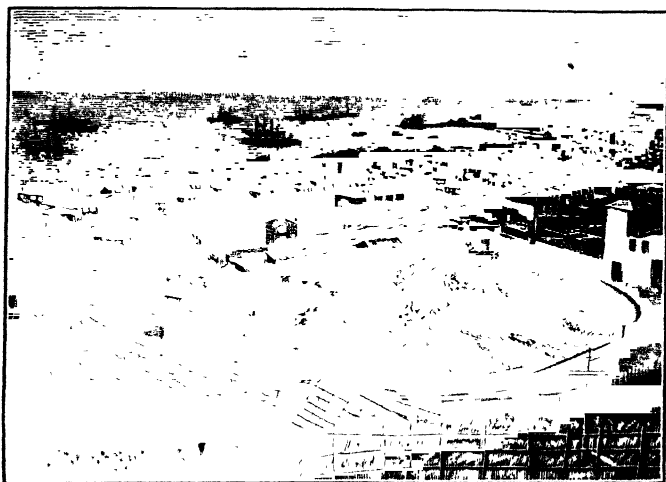


Photo N P Edwards

MADEIRA.

9. The CANARIES are usually reckoned as seven islands, with the Grand Canary as chief; but Teneriffe, with its famous peak, is much better known. Both islands have important towns; Teneriffe contains in Santa Cruz the seat of the Spanish government, and Grand Canary has a fine harbour in Las Palmas. Ferro, the

farthest west land in the Old World, was used for a long time as the site of longitude 0°, which now, of course, is fixed at Greenwich.

10. MADEIRA and the AZORES both belong to Portugal, and, like the Canaries, they have a beautiful climate and fertile soil. Funchal, the capital of Madeira, is a favourite resort for invalids; St. Michael's island has made the Azores famous for oranges, and Flores was the scene of the glorious fight fought by Sir Richard Grenville in the days of Great Elizabeth.

PART III.

PRODUCTIONS.

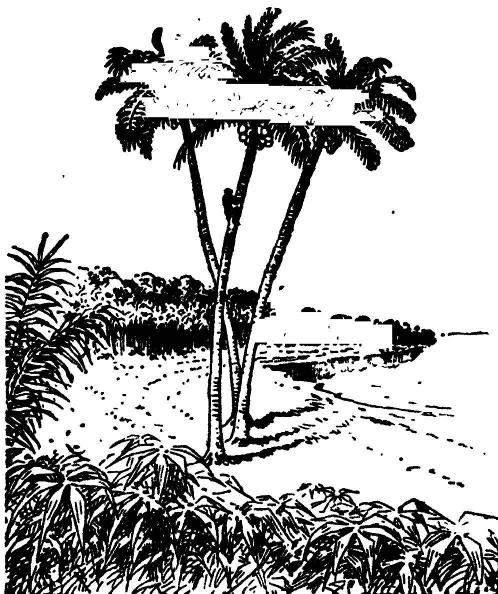
Food Plants.

1. The plants of a country depend partly on its soil and partly on its climate. Some thrive best on loose soil, such as you find on the edge of a sandy desert, and others on stickly soil, such as clay; some like a great deal of moisture, which is generally found near the sea, and others prefer dry ground, which is generally found inland; some need constant sunshine, while others grow in the shade.

2. As a rule, the particular food-plant which thrives best in a particular country comes to be the special food of the people of that country,—for instance, oats in Scotland and potatoes in Ireland. The chief food-plants are grains, pulses, and fruits; and almost every country has some grain or pulse or fruit which will serve as human food.

3. The most important grains in Africa are rice, maize, millet, and wheat. Rice and maize

require damp heat, and millet and wheat require drier heat; rice requires great moisture and great heat. The most important pulses are peas and beans, which are largely grown in the deep soil



COCOA PALMS.

and warm climate of Egypt. The most important fruit is the date, which is the great product of the oases. Sugar is also important, especially in the east and south-east.

4. If we now look at the various countries separately, we shall be able to decide the kind of

plant which each will grow; and we shall find that, if any country cannot grow enough vegetable food for its inhabitants, they must either import more or get some other kind of food, *e.g.* fish or flesh.

5. Let us look first then at the BARBARY STATES. They are quite a characteristic piece of Africa, rising in terraces from low coastlands to flat-topped mountains or high tableland. In climate, however, they are more favoured than most of the continent. Their latitude makes the heat temperate, while the absence of west winds makes the air dry and healthy; there is a fair amount of rain off the Mediterranean, and the dry air implies constant sunshine.

6. Under such circumstances you may expect to find the grains of temperate regions, along with very fine fruits suitable to the same kind of regions; but, as we have already noticed that the interior of the states is more or less desert. especially in Tripoli, you may expect also to find some special 'desert' foods.

7. The fertile sheltered valleys of the Tell district produce excellent 'European' grain, especially wheat and barley, and 'European' fruit, especially grapes, olives, almonds, oranges, and lemons—the grapes grown on the drier and the other fruits on the damper slopes. And the

oases of the interior produce magnificent dates, especially Fezzan and Tifilet.

8. The SUDAN, as we saw, might be divided into two parts—one inland, the slope from the northern up on to the southern plateau, and the other the low coast strip generally known as Upper Guinea. The damper parts produce rice, while the drier parts produce millet, under the name of durra. The 'sorghum' species of millet is also grown for the sugar which it contains.

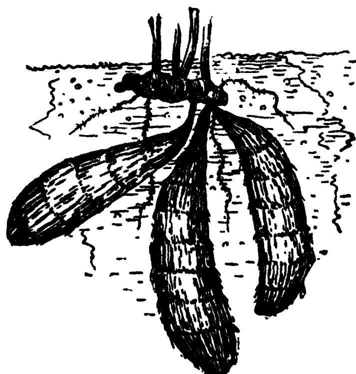


BANANAS.

9. EGYPT is exceedingly important because of its rich alluvial soil and the Nile floods. It grows all kinds of grain—wheat in the valley, rice on the wettest parts of the delta and the Fayum, and maize on the intermediate land. Pulses of all kinds also flourish, especially peas and beans and lentils. And dates grow in the desert parts.

10. ABYSSINIA has at least two kinds of food-plants—those which grow on the ordinary

plateau and those which grow at the bottom of the gorges cut by the rivers. The latter are really 'tropical' plants, bananas and sugar-cane being the most important; the former are the ordinary grains and fruits of the south of Europe, such as wheat and olives.



MARANTA (FROM WHICH ARROWROOT IS PREPARED).

11. East Africa, like the neighbouring country of Abyssinia, has two distinct kinds of food-plants. On the low, damp coastlands and in the deep valley occupied by the Great Lakes bananas grow in the utmost luxuriance; on the plateau the most important plant is millet. Manioc is also grown for 'tapioca.'



BREAD FRUIT (OR KAFFIR BREAD).

12. In the intense damp heat of West Africa bananas again are the most important plants; and in the Congo Free State maize and

manioc are also grown, while in Angola the chief crop is sugar. Peanuts and arrowroot are also important—the peanuts being generally called *ground*-nuts, because the pods ripen under ground.



MEALIES (MAIZE).

13. The ZAMBESI REGION once more gives the usual African contrast between the plants which grow along the bottom of the river-valley and those which grow up on the plateau. Down in the valleys rice and sugar are the chief crops. while the plateau produces maize and millet,

The millet begins here to be called 'Kaffir corn,' and the maize to be spoken of as 'mealies.'

14. BECHUANALAND is a country where every thing depends on irrigation; but, as there is no fine river like the Nile, the supply of water is very uncertain. The characteristic crops are mealies and Kaffir corn, which grow to perfection wherever the water-supply is fairly good, as along the Hart and the Molopo rivers.

15. The TRANSVAAL colony has two agricultural belts, for the northern part is lower, as well as nearer to the equator, than the southern, and is therefore much hotter. It is also the better watered. The Bush Veldt, or lowland along the Limpopo, produces sugar; and the Middle Veldt, or 'Garden of the Transvaal,' produces mealies. The ORANGE RIVER colony also grows mealies.

16. CAPE COLONY is too dry in most parts for successful agriculture; but its heat is not excessive, and the dry moderate heat suits wheat and grapes. The best wheat comes from Malmesbury, and the best grapes and wine from Paarl and other places close to Cape Town. In the damper heat farther east, especially near Port Elizabeth, grapes will not grow, and mealies replace the wheat.

17. Still farther east, the still damper heat of

NATAL AND ZULULAND grows mealies to perfection, and along the coast there are large plantations of sugar-cane, from which quantities of rum are made.

18. MADAGASCAR has four chief crops—the damp deadly lowlands along the east coast grow



Photo N P Edwards

LIMPOPO RIVER.

sugar and pine-apples; elsewhere rice and maize are all important, the damper and hotter parts producing the rice. In the rest of the PACIFIC ISLANDS, especially Reunion and Mauritius, the staple crop is sugar.

19. In the ATLANTIC ISLANDS the commonest crop is perhaps potatoes, especially in St. Helena,

Tristan da Cunha, and the CANARIES. In the Canaries they are grown, along with tomatoes, for the early London market. The Canaries also, like Madeira, grow splendid grapes.

'Drink, Drug, and Spice' Plants.

1. The most important plants which come under this title, are coffee and tobacco, but there are several others which are in every-day use now, such as senna, myrrh, cloves, etc. All these require great heat, and most of them require great moisture.

2. As you probably know, the Turks are great smokers, and you may, therefore, expect to hear that the Turkish dependencies in Africa grow tobacco. Very good tobacco is grown on the Murzuk and Ghat oases of Tripoli, and on several of the other oases behind the BARBARY STATES, especially Tuggurt and Tuat. There is also an export of olive oil, especially from Algiers.

3. The SUDAN has naturally two distinct varieties of these plants—those which like the damp heat of the low coastlands, or Upper Guinea, and those which grow inland on the plateau. Both the British and the French possessions round the coast export palm-oil, kola,

gum-copal, sesame, and pepper; and Liberia exports coffee.

4. EGYPT exports typical desert products as well as all the numerous plants which can be



TOBACCO.

grown along the river. Very good tobacco grows in Darfur; and the still drier parts of the Eastern Sudan produce aloes, myrrh, and senna. The aloe has thick, fleshy leaves, which enable it to resist drought; and its fibrous, or thread-like, parts are almost as useful for string,

etc., as its juice is for medicine. The senna comes from a pulse, or bean-like, plant called cassia (cf. "myrrh, aloes, and cassia"); and myrrh is one of the shrubs which secrete —as it is called—gum or oil.



COFFEE LEAVES, FLOWER, AND FRUIT.

5. These three products are typical of desert and semi-desert regions, where only those plants can survive that have one or more of the following reasons for being able to resist drought. Some are able to lengthen their roots so as to reach water far below the surface; others are dwarfs, whose supplies of sap are sufficient for their tiny limbs; others, again, thicken their barks or protect their leaves with thorns or with a leathery kind of skin (cf. the holly); and others contain scented oil, which the sun cannot easily evaporate.

6. NORTH-EAST AFRICA combines well-watered mountain slopes with desert lowlands, and therefore grows coffee on the one and myrrh and

frankincense on the other. The myrrh and frankincense come specially from the Somali peninsula, Jerlogubi being a great market for them; and the best coffee comes from Galla and Abyssinia. Indeed, the plant is a native of the district, and perhaps derives its name from the *Kaffa* country. Sokotra exports aloes.



COFFEE TREE.

7. East Africa has products very similar to those of the North-East. The dry lowlands grow myrrh, aloes, and senna; the damp heat of the coastlands favours gum-copal and various spices, especially cloves from Zanzibar; and the forested seaward slopes of the plateau grow good coffee. Along the coast copra and chillies are also becoming important.



CLOVES.

8. West Africa produces mainly palm-oil;

but coffee grows well, especially in the Kamerun district, in French Congo, and in the north of Angola. As the country gets fully developed, the export of coffee will probably increase largely.



CLOVE TREE.



OIL PALM.

9. The ZAMBESI coastlands, which belong entirely to Portugal, produce palm-oil; the highlands behind the coast, which belong almost entirely to Britain, produce excellent coffee, especially in the Nyasa district. Here again, however, there is a great want of good and

cheap transport. Hemp and tobacco grow wild in Rhodesia, and both are smoked, though hemp-smoking causes certain death in quite a short time. The fibre also supplies the juice out of which the drug known as 'bhang' is made.

10. The plateau of the old Dutch Republics is mainly pastoral; but in the Bush Veldt—or lowlands along the Limpopo river—the TRANSVAAL COLONY grows good coffee. Tobacco is also grown, and will probably be cultivated on a large scale.

11. The scanty rainfall of CAPE COLONY is not favourable to agriculture, but very good tobacco is grown in the fertile valley of Oudtshoorn; and in the drier parts the aloe is cultivated. The natives also consume 'bhang,' made of hemp grown in the colony.

12. NATAL is the only country in Africa which really attempts to grow tea, though the shrub would flourish in several places; and the Natal tea, which is grown along the Tugela river, is specially good. On the coastlands, too, the eucalyptus is widely grown—for the improvement of the climate—and the oil is distilled in Durban.

13. The ISLANDS of the Atlantic are mainly devoted to the raising of fruit, but in those of the Pacific there is a considerable variety of the

plants which we are discussing. Reunion and Madagascar grow coffee; Reunion and the Seychelles grow vanilla; Reunion also grows aloes; and the Seychelles export palm-oil.

Textile Plants.

1. Clothing of some kind or other is a necessity except amongst very savage people in the hottest parts of the world, and it is made of all sorts of materials. In very cold climates it is made chiefly of animal products, *e.g.* leather and wool, while in very hot ones it is made chiefly of plant products, *e.g.* cotton and flax.



COTTON PLANT.

2. Of the plants used for this purpose, cotton and flax are by far the most important; and they are the only textile plants—*i.e.* plants which provide materials for weaving—of any importance in Africa.

3. Cotton grows best on light soils in warm climates; it is very easily injured by frost, and requires a great deal of moisture and some salt. Naturally, therefore, it will do best on low sandy land near the sea in or close to the Tropics.



COTTON PLANT.

4. It can, however, be grown some distance from the sea; and it is grown in the heart of the Sudan and in the Saharan oases. But the cotton-'wool' is then not so long or so good, or so easily cleaned, as when it grows near the sea. It is not grown in sufficient quantities, therefore, and is not of good enough quality, to be exported.

5. Both cotton and flax are widely cultivated over the continental part of the SUDAN for local use, and the cloth is dyed with indigo also grown on the spot. Kano, which is the chief caravan terminus, is in one of the best cotton-growing districts.

6. The delta of EGYPT raises very large quantities of cotton; and some of the Lancashire

towns, for instance Bolton, depend almost entirely on Egyptian cotton. The old lake district of the Fayum, which is watered from the Bahr Yusaf, or 'River of Joseph,' also grows cotton.

7. On the low 'tropical' lands of the river-gorges in ABYSSINIA a good deal of cotton is grown; but here, as in the Sudan, it is grown only for local use, and there is no export of it. And the same is true of the Zambesi and the Congo basins.

8. Flax is grown in the extreme north and the extreme south, especially in EGYPT and BRITISH SOUTH AFRICA; and, as wild hemp is found also in the south, especially in Rhodesia, it would certainly pay to cultivate it properly.

9. In the east and west of the Tropical area, and especially in MADAGASCAR, palm-fibre is largely used for making various fabrics; and in the north, especially in ALGERIA, a quantity of esparto grass is grown, the fibre of which is made into cordage and various other fabrics besides paper—its chief use in Europe.

Other Industrial Plants.

1. Amongst the other industrial plants of Africa, woods and dyes are the most important; and the most valuable of each are probably ebony

and rosewood, indigo and archil. Rubber creepers are also very important.

2. The special product of BRITISH SOUTH AFRICA is the archil, or orchil, a violet dye obtained from the orchilla lichen, which grows on the rocks along the sea-coast.

3. The damp heat of the ZAMBESI region is favourable to indigo and various rubber creepers, and the large export of rubber from Mozambique is supplied partly from the lowlands along the Portuguese territory, and partly from the Nyasa district of British Central Africa.

4. WEST AFRICA is particularly rich in woods, numerous kinds of dye and cabinet woods being exported both from Upper Guinea and from the Congo basin; but rubber is being used now for so many purposes that the rubber creepers are the most valuable product. All the political divisions alike export rubber, the best quality perhaps coming from the British, German, and French areas along the coast.

5. Rubber is also one of the chief exports of EAST AFRICA, the coastlands of both the British and the German territory having the excessively unhealthy climate which suits the creepers best. The most productive regions are probably the lands from Mombasa as far south as Zanzibar.

6. North-East Africa is too dry and too healthy for rubber creepers, its most characteristic



BRINGING DOWN RUBBER.

plants being such 'desert' products as myrrh and frankincense; but in the deep gorges of Abyssinia indigo is grown, and the native forests supply good ebony.

7. The NILE VALLEY produces a great variety of these products. The forested area round Fashoda produces ebony and rubber; the park-lands grow indigo; the intermediate 'steppe'



lands between the 'parks' and the desert grow safflower, which is often used in making rouge, and in adulterating the more expensive saffron; and the river banks even in the desert area still produce the *papyrus* reeds, out of which the Greek and Egyptian *paper* used to be made.

8. In the SUDAN ebony and rosewood are exported from the Niger basin, and there are numerous rubber creepers; and the drier parts grow very large quantities of indigo—especially



MAHOGANY.

in the Sokoto empire—out of which the native cotton fabrics are dyed the prevailing blue colour.

9. NORTH AFRICA is specially noted for its various kinds of oak. The commonest and the most important is the cork-oak, from which large

quantities of cork are exported, especially by Algeria and Tunis. The next in importance is one which flourishes best in Marocco, and on which the *kermes* insect—the source of *carmine* or *crimson* dye—feeds, as the cochineal insect feeds on the cacti and euphorbias of the Canary Islands.

Animals which provide Food.

1. By this time I hope you have fully realised that the dense jungle of Central Africa is so unhealthy that it has very few inhabitants; and these few, in such a climate, could not eat much animal food. On the other hand, the healthy lands in the extreme north and extreme south are so dry that pasture is more profitable than agriculture.



2. NORTH AFRICA has, as we have seen, products more like those of Europe than those of Africa. In the dry mountains, especially on the great Atlas, sheep and goats are kept; but it is mainly for their wool and hair, not for food. Both yield milk, however, goats' milk being

particularly wholesome; and the natives make all kinds of 'cheese' preparations.

3. In the drier interior, and especially in the SAHARA, the camel is the important animal, for its characteristic qualities fit it specially for desert work. Not only can it shut its nostrils and lower fine 'veils' of a kind of hair over its eyes so as to exclude the sand during the most furious simoon, but it is also provided with feet, stomach, and hump specially adapted to regular desert life.



CAMEL.

4. Its foot is so broad and elastic that it does not sink easily into even the loosest sand, and covered with skin so tough that it is not scorched by the hottest sand; its stomach has little pouches round it, in which it can store water; its hump is an accumulation of fat, on which the beast can live when other food fails; and its mouth and tongue are so hard that it can eat all except the most prickly of cacti and other desert shrubs.

5. Moreover, it requires very little food, and that only of the coarsest kind; and yet it can travel on such food for miles. An ordinary luggage camel, carrying a load of 800 or 900 lbs., can go 25 miles a day, and will keep that pace up for three days without drinking a drop of water.

6. Most of the camels in Africa are of the Arabian or dromedary kind, which has only one hump, and which is specially noted for its speed; it can travel from 60 *to* 90 *miles a day*, and can be ridden at the less pace (60 miles a day) for four or five days without drinking.

7. As you might expect, these animals are not kept specially for food; but the less valuable ones are largely reared for their milk, which is the usual food of the Arab, and their flesh is occasionally eaten as a great delicacy.

8. The dry air of these northern regions is also very favourable to the 'secreting'—as it is called—of scented oils by flowers; and this attracts such swarms of bees that North Africa is famous for honey.

9. In a country so small as Egypt proper, and with such advantages for agriculture, pasture is of course extremely limited; but the SUDAN has huge acres of magnificent pasture, splendid cattle

being raised, specially in the upper part of the Niger basin.

10. NORTH-EAST AFRICA is noted for cattle, camels, and sheep. The cattle come from Abyssinia and the island of Socotra; the camels and sheep come from Somaliland. The sheep are specially interesting, because they show signs of having adapted themselves to desert life, and—like the Yemen sheep in the neighbouring peninsula of Arabia—store fat on their tails, so that they are known specially as 'fat-tailed' sheep.

11. In EAST AFRICA two very famous peoples, the Zulus and the Masai, are essentially cattle-rearers; and some of the finest pastures in the whole continent are on the plateau along the east side of the Great Lakes.

12. WEST AFRICA is not, as a rule, favourable to pastoral occupations; but the part of Angola, which is called Mossamedes, is very well suited to cattle-rearing, and the cold Benguela current from the Antarctic Ocean brings such quantities of fish with it that a bay near the town of Mossamedes is actually called the Great Fish Bay.

13. The ZAMBESI region has large areas of very fine pasture; but the pastures along the river itself cannot be much used at present, because of

the presence there of the tsetse fly, the bite of which is fatal to beasts. The Matabele and Mashonas are, however, essentially cattle-rearers, and most of their wealth is in cattle.



ON THE TRANSVAAL VELDT. Photo N P Edwards

14. The rest of BRITISH SOUTH AFRICA, however, is much the most important pastoral area in Africa. The finest cattle come from the east of Bechuanaland, the middle of the Transvaal, the Caledon valley of the Orange River Colony, and the Transkei district in Cape Colony. The finest sheep come from the Karroos of Cape Colony and the high lands of Natal and the Transvaal Colony.

15. On the Madagascar plateau both sheep and cattle flourish; but the typical animal food of all the ISLANDS, especially the Canaries and the Mascarenes, is the turtle.

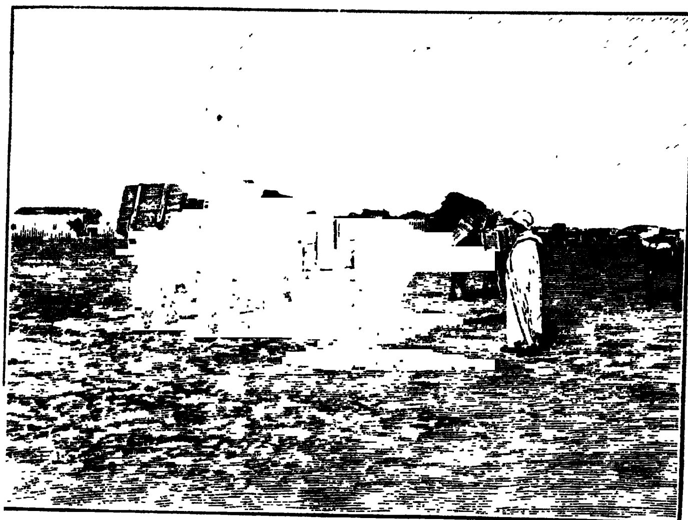
Other Industrial Animals.

1. Most of the animals which provide food of various kinds, are also useful for other purposes. For instance, all those which supply milk or meat have skins suitable for making leather, or hair suitable for making cloth; and many of them are exceedingly valuable as beasts of burden. On the other hand, some animals which have very valuable skins or hair are of no use for food or as beasts of burden.

2. We have seen several times that the dry climate of the BARBARY STATES is more favourable to pasture than to agriculture, as a rule, and that in the driest part agriculture is impossible, so we may expect them to have several pastoral products.

3. The chief pastoral products are wool, mohair, goat-skins, and feathers; and there is also an export of ivory, but the tusks are obtained in the first instance from the Sudan, and only exported *through* these States.

4. The wool and mohair—that is, goats' hair—are most important in Marocco. The mohair is particularly valuable, because it is very fine, as soft as silk, and of an almost silvery whiteness;



TRANSPORT IN ALGERIA. Photo N P Edwards

and it is therefore in great demand in Leeds and other Yorkshire towns for manufacturing various kinds of cloth.

5. Marocco is not a very civilised state, and its industries are not properly developed; but there are some characteristic manufactures connected with these pastoral products, especially real 'Marocco' leather, rugs, and carpets, and

'Fez' caps. The latter are called after the chief city of the country, and their red colour is due to their being dyed with *carmine*, which is obtained from the *kermes*—an insect that lives on the oak trees of the Atlas Mountains.

6. Most of the feathers are ostrich feathers, and come from Tripoli, and Tripoli also exports most ivory. The feathers, like the ivory, often come by caravans from the Sudan in the first instance, and are only exported *through* Tripoli.

7. The dry air, as we have already seen, is very favourable to the growth of flowers with a large amount of the oils in them which bees like; and there is an export of wax as well as of honey.

8. There might also be a great scent industry, especially in Algiers, with its large French population; for the civet is found in Algeria. The civet is *not* a 'cat,' though it is so often called the civet-cat, but an animal between a weasel and a fox. Its fat is much used in the manufacture of scent; and, with such an abundance of sweet flowers, scent might be made very easily and very cheaply.

9. There are only two other valuable animal products from these States, and both are found in the warm shallow waters along the coast. One

is the sponge, and the other is coral; and, though the sponges are not quite so good as those from the Levant—that is, the east end of the Mediterranean—nearly all the Mediterranean sponges are thoroughly good.



CIVET CAT.

10. Egypt also supplies sponges, coral, and wax, but the sponges and the coral come from the Red Sea coast, where there is also some pearl-fishing. The coral banks are not as rich on the Egyptian as on the Arabian side of the sea, but the warm water is very favourable to the growth of coral.

11. Egypt has also two 'river' products in the skins of crocodiles and hippopotami, which haunt the banks of the Nile; and 'crocodile' leather has now become quite an important article of trade.

12. Egypt exports a good deal of the SUDAN produce, amongst which there are goat-skins and ostrich-feathers—from the drier northern parts along the edge of the Sahara, and ivory—from the damper southern parts along the edge of the tropical forest.



AFRICAN ELEPHANT.

13. The animal products of ABYSSINIA come from the lowest and the highest parts of the country. The dense forests along the sides of the deep river-valleys are still well supplied with elephants; and the mountain slopes are the home of the musk-deer, the musk being used for medicine as well as for scent.

14. EAST AFRICA, as we have seen, has three

typical areas—the fine high tableland, along which the Great Lakes lie,—the dry, almost desert 'elbow' of Somaliland,—and the damp densely-forested lowlands along the coast north and south of Zanzibar.

15. The tableland is a famous cattle district, and the various 'Zulu' tribes are very skilful in skinning their beasts; civet-fat and ostrich-feathers come from Somaliland and the other drier parts; and the forests still supply ivory, though the elephants are being killed off very rapidly and recklessly.

16. West Africa has been so recently opened up that it is still largely covered with tropical forest, and the chief animal product is ivory, though hides are exported from the cattle-pastures of Southern Angola.

17. The Zambesi region has till recently been one of the districts most infested with the tsetse-fly. This insect is fatal to horses and cattle, and therefore the rich pastures of the river valley have been more or less neglected hitherto. Up on the plateau, however, especially in Mashonaland, cattle seem to thrive; and there are certainly immense areas of rich pasturage, from the forested parts of which there has been a considerable export of skins of wild beasts.

18. The small rainfall along the Tropic of Capricorn makes agriculture almost impossible, and the animal products are therefore of great importance. Hides and horns are exported from SOUTH-WEST AFRICA, both from the Damara highlands and from Bechuanaland; and Bechuanaland has also a valuable wool trade. All round the Kalahari Desert flocks of native sheep and goats are kept, and their wool is useful on the spot, though not very good.



ANGORA GOAT.

19. The TRANSVAAL AND ORANGE RIVER COLONIES have more rain, and therefore better pasture and more agriculture, than Bechuanaland. The Transvaal Colony is specially famous for its wool and its horses, while the Orange River Colony is more famous for its ostrich-feathers and cattle products, the latter mainly from the valley of the Caledon river. The Orange River Colony, however, also produces very good wool, especially in the valley of the Vaal.

20. CAPE COLONY, like nearly all the rest of South Africa, is much more fitted for pasture than for agriculture, and exports very large quantities of wool and mohair. Both are partly obtained from native sheep and goats, but the

native animals do not produce nearly such good wool and mohair as the imported animals—the Merino sheep and Angora goats. The Great Karroo is the chief district for them, and the special centre is Graaf Reinet.



Photo. N. P. Edwards.

SHEPHERD'S HUT ON THE KARROO.

21. Besides the wool and the mohair, Cape Colony also supplies oxen and ostrich-feathers. The oxen come from the south-east part of the colony, where there is the heaviest rainfall, for this makes the grass too rich for sheep and goats; and they are used mainly for the great wagons by which most of the traffic inland is

done—at least, wherever there are no railways. The ostrich-feathers are exported to Europe and the United States, one of the chief centres of the ostrich-farms being Grahamstown.

22. NATAL, which includes Zululand, is very like Cape Colony in many ways, but is not so dry. Down on the coastlands there are a great many mules, which are needed for work on the sugar-plantations, where horses cannot live. Up on the slopes of the Drakenberg Mountains large flocks of sheep and goats are kept, the wool and mohair being exported from Durban. And between the coastlands and the mountains there are good pastures for horses and cattle.

23. The ISLANDS of the Pacific have different animal products, as a rule, from those of the Atlantic. Those in the Pacific are specially noted for ambergris—a kind of fat from the sperm-whale, which is found floating round their coasts, and which is used, like the fat of the civet, in the manufacture of scent. Those in the Atlantic are specially noted for the cochineal insect, from which cochineal dye is obtained.

24. Both sets of islands, however, supply considerable quantities of what is called 'tortoise-shell.' It is really '*turtle*-shell'; and the best qualities are said to come from the British island of Ascension.

25. MADAGASCAR is so large, and has such an extent of high tableland, that cattle and even sheep flourish in it; but its native animals, like its native plants, are exceedingly curious, for some of them are not found anywhere else in the world. The lemur is probably the best known.

Minerals.

1. Africa is known to be rich in mineral products, including coal and iron, gold and diamonds; but the continent has been so little developed that its mineral wealth is probably very much greater than most people realise at present.

2. In the meantime, the most valuable mineral product of the BARBARY STATES is salt. It is found both in the form of rock-salt and in the form of deposits from salt-lakes, such as the numerous 'Shotts' of Algeria and Tunis. Iron and silver are also known to exist in Algeria, and a kind of earth called Tripoli powder is exported from Tripoli.

3. The desert condition of the SAHARA is naturally very favourable to the formation of salt-swamps, and salt is the great mineral product of the Sahara, coming especially from

Tandeni and other parts of the south-western division of the desert.

4. The SUDAN, as we have seen, really includes two very different areas—the dry tableland inland and the steaming lowlands of the 'Upper Guinea' coast. There is certainly plenty of extremely good iron in different parts of the tableland; and Upper Guinea has produced gold for so long that we even get our word *guinea* from it. If you look at your map, you will find that the British possessions include what is called the "*Gold* Coast."

5. The NILE REGION produces stone, iron, and various kinds of 'salt.' The chief stone is syenite, which takes its name from Syene, the old name of Assouan. The iron is found of very good quality and in huge quantities in Darfur, where the natives seem to have worked it for centuries.

6. The various kinds of 'salt' are common salt, sal ammoniac, and nitre. The common salt comes chiefly from the north of the Libyan Desert; the sal ammoniac took its name from the Temple of Jupiter *Ammon*, where it was first made; and the nitre comes from the great natron lakes between Cairo and Alexandria.

7. The whole of CENTRAL AFRICA, from the Atlantic to the Pacific and from the equator

down to Rhodesia, is more or less an unknown land as far as its minerals are concerned. There must be iron in abundance, for the natives have worked it for many generations, and they are known to possess considerable quantities of gold-dust and copper. There are also salt lakes on the north of the tableland, and—with such a mighty line of volcanoes—there must be sulphur.

8. The ZAMBESI region contains large areas of granite rock, across which there are belts of blue slate, and in this blue slate there are the particular kinds of quartz which have always proved elsewhere to be exceedingly rich in gold. A great deal of gold has already been found there; and the whole country, especially Mashonaland and Matabeleland, is probably rich in the metal.

9. The chief towns are Bulawayo and Salisbury, the two capitals, and several others stand on the great road from the Limpopo to the Zambesi, *e.g.* Victoria, Charter, and Hartley Hill. The discovery of some very interesting ruins in this district, especially at a place called Zimbabye, has caused people to believe that this is probably the Ophir from which King Solomon got his gold. Perhaps you have read Mr. Rider Haggard's story of *King Solomon's Mines*, which is about this very district.

10. Besides the gold, there are several other useful minerals, including iron and saltpetre. The iron is of very good quality, and has been worked by the Mashonas for many years. They also mix the saltpetre with the bark of a particular tree to make gunpowder, but it is of a very feeble character.

11. SOUTH AFRICA contains a great variety of mineral wealth, and, as it has a better climate than any other equal area of the continent, it has been more fully developed.

12. The great mineral product of the Kalahari Desert and the neighbouring regions is naturally salt; and some of the little settlements in the west of Bechuanaland have an important salt trade, especially Kuruman.

13. Round the mouth of the Orange River the chief mineral product is copper. The Germans work it in Great Namaqualand, and the British colonists work it in Namaqualand. The richest mines are at a place called Ookiep, from which the copper is taken by a tramway, drawn by mules, down to the little harbour of Nolloth.

14. The Transvaal Colony is very rich in almost all kinds of minerals, including good coal; but the great product is of course the gold, which has made Johannesburg so famous.

There are two chief gold districts. The one of which Johannesburg is the centre, is called the Witwatersrand, which is the name of the line of hills that divide the basin of the Orange River



Photo. N. P. Edwards.

MINE, JOHANNESBURG.

from that of the Limpopo; and, besides Johannesburg itself, there are several other important towns—for instance, Krugersdorp, etc.

15. The other great gold district is up amongst the spurs of the Drakenberg Mountains, and is called De Kaap. It is not as famous as the Witwatersrand, but is very rich

in gold, especially round Barberton and Lydenburg. Very good coal is also mined round Boksburg.

16. The Orange River Colony also contains gold and various other minerals, but its two special products are diamonds and coal—"diamonds and *black diamonds*." The diamonds are found, naturally, in the parts of the colony nearest to the great Kimberley diamond-field. The chief coalfields are between Kroonstad and Heilbron, and the fierce fighting at those places in the recent war was partly for the possession of the coal-pits.

17. The minerals of Cape Colony include—besides the copper of Namaqualand—coal and diamonds. All over the district of Griqualand West there are deposits of blue clay, and in this blue clay there is always a great chance of finding diamonds; but Kimberley is the richest centre, and the production of the mines is valued at about *£4,000,000 a year!*

18. The coal of Cape Colony is of very poor quality, though there is plenty of it; and good English coal is so expensive that the cheap Cape coal is used whenever it can be. The largest 'pits' are up in the Storm-Berge Mountains, where the face of the mountains is coal, so that it is *quarried* out of the hillside, not really 'mined.'

19. Natal is much better off in this respect than Cape Colony, for its coal is particularly good. The chief coalfield lies along the seaward slopes of the Drakenberg Mountains between Majuba Hill and the famous Van Reenens Pass into the Orange River Colony. The centre of the district is the historic town of Ladysmith, but the best pits are at Dundee and—as the name suggests—Newcastle.

20. The ISLANDS of the Continent are naturally not very rich in minerals, but it is known that Madagascar contains iron, copper, gold, and sulphur; and the people are so clever in making ornamental metal-work that it seems probable that the industry must have been carried on for many generations.

PART IV.

THE CITIES.

How Cities Grow.

1. The life of a city is not unlike the life of a human being, and it may be divided into five stages—birth, youth, full growth, old age, and death.

2. The very existence of cities is due to the fact that man is what is called a "social animal"; that is to say, he likes to live with a number of other men. Of course, there are exceptions to this rule. Some men prefer to live alone because they dislike their fellow-creatures, others because their occupation must be carried on at some distance from the noise of a crowd. For instance, a fisherman or a hunter does not want to be accompanied on his fishing or hunting by a whole tribe of men and women.

3. The mass of us, however, prefer to live amongst our fellow-creatures; and in these modern times it is almost impossible to avoid doing so. No ordinary man can provide himself

with everything which he needs or wishes for, and so he has to live near other people who can provide him with the things which he cannot supply himself. Thus, wherever there are any people at all, they tend to live close to one another—in a hamlet, a village, a town, or some



COMMERCIAL STREET, JOHANNESBURG.

larger group. And when a town has grown to a certain size, or has obtained a certain organisation, such as a Corporation, it is generally called a city.

4. It is most probable that in very early ages people liked to live together in groups for safety as much as for any other reason. They wanted to have some place to store their food in,

especially for winter use; and they wanted allies to help them to defend these store-houses or towns. Of course, if they could find a place for a store-house which was very easy to defend, so much the better; but the places which were most easy to defend, were usually most difficult to get at.

5. The great object was, therefore, to find a place which was easy to get at in times of peace, and yet easy to defend in time of war; low level land was the easiest to travel over, and high rocky land was the easiest to defend. In fact, people acted by instinct in those days as a modern Railway Company acts after full deliberation—they travelled along river-valleys, through mountain passes, and over level plains, instead of across the rivers, over the highest peaks of the mountains, or up and down the roughest highlands.

6. Of course, if there was only one easy route through any large district, every body would go by that route; and it would become exceedingly important. If there was any place along it specially easy to defend,—for instance, a steep hill or an island in a lake—it would be seized upon as a place both easy to get at and easy to defend; and a town or city would spring up.

7. The importance of the place would probably

depend on the richness of the country in food. A place where there was abundance of food, would grow quickly; a place where food was difficult to get, would grow slowly. Fertile soil would, therefore, be one thing to look for; woods or fens in which there might be wild pigs or deer or birds, would be another; rivers in which fish were abundant, would be a third. Other useful things would be salt, to pickle meat for winter use—flint to strike fire from, or to make weapons out of or to sharpen weapons with—clay, to make household pots and pans out of.

8. In modern times, most of these things have become of comparatively little importance; but their place has been taken by other things which have the same result. For instance, the discovery of gold or silver in a hitherto unknown place will attract people as quickly as even the discovery of a good bed of flint or clay attracted them. Various inventions, too—especially gunpowder—have made all positions, high or low, more or less equally safe or unsafe; so that gradually it is becoming much more important for a place to be easy to get at than for it to be easy to defend.

9. These principles may be illustrated from all parts of Africa. For instance, **MAROCCO** has three typical towns—Tangiers, Fez, and Marocco.

The first of these, being a harbour, and in the part of the country nearest to Europe, illustrates 'easy access,' and is the commercial centre. Marocco, one of the political centres, stands in the middle of a fertile plain, where food is abundant. Fez, the other political centre, and the largest city in the country, stands in a high valley of the Atlas range, where it illustrates 'easy defence.'

10. ALGERIA and TUNIS illustrate the same principles. For instance, Constantine—once one of the most famous fortresses in the world—stands on the top of a huge steep crag some miles inland. Algiers is a really fine natural harbour, with very 'easy access.' Tunis commands the narrowest part of the Mediterranean, as Carthage used to do in days of old.

11. TRIPOLI also contains three typical towns—the capital of Tripoli itself, Ghadames, and Murzuk. Tripoli is not a good harbour, but it is the only one, and therefore is very important. Ghadames and Murzuk are two typical 'oasis' towns, their chief business being to collect or distribute the great caravans which ply between the Mediterranean and Lake Chad.

12. The continental part of the SUDAN has only one type of important town—the terminus of a caravan route. The most important will

obviously be the terminus of the central or most important route—Kano; but Sokoto and Yakoba are also great centres. Timbuktu and Kuka, besides being termini, have also the advantage of water traffic—on the Niger river and Lake Chad.

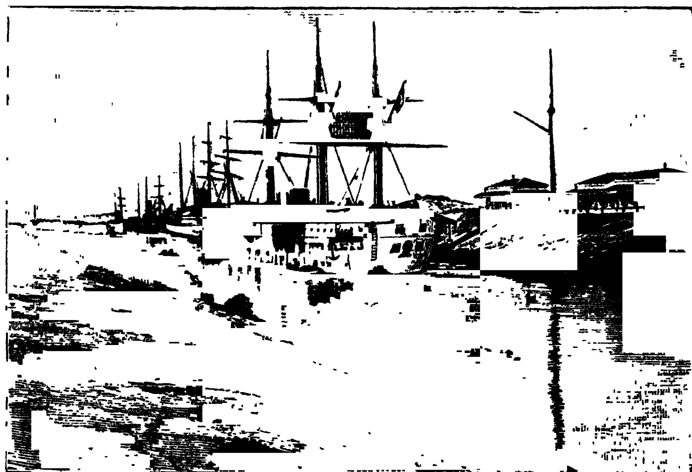


Photo N. P. Edwards.

SUEZ CANAL.

13. The coastal Sudan, or UPPER GUINEA, has typical places of 'easy access' in Sierra Leone, Monrovia, and Lagos, while Cape Coast Castle commands the great political and commercial route inland to Kumasi.

14. The NILE REGION is specially interesting because it combines some of the oldest with some of the most modern influences which affect

the growth of cities. For instance, Fashoda is the great centre of the Eastern Sudan; Khartum and Berber command the confluences of important rivers; Suakin and Kassala command the approach to the Nile from the Red Sea.

15. In Egypt proper, each cataract on the Nile is marked by a town—for instance, Assouan or Wady Halfa—which sprang up originally to supply transport of goods over or round the cataract. Ismailia and Port Said owe their existence to the Suez Canal. Alexandria is the chief harbour of the country. Cairo, the capital, stands at the very beginning of the delta, where it can command both the delta and the river valley.

16. In NORTH-EAST AFRICA there are very few towns of any importance, much the most important being the Italian harbour of Massowah, and the best known being perhaps the fortress of Magdala. The capital of Abyssinia is Addis Abeba.

17. EAST AFRICA has typical towns in Zanzibar, Mombasa, and Bagamoyo. Zanzibar and Mombasa are both island harbours—Mombasa being the best, and Zanzibar being the second, harbour on the east coast of Tropical Africa. Bagamoyo owed its old importance to the fact that it was the terminus of the chief slave-route from the interior.

18. WEST AFRICA is still so little developed, mainly because of the dense jungle, that there are very few towns. In the Congo Free State all the important places are river ports, such as the capital of Boma, Leopoldville, and Nyangwe.



THE LANDING PLACE, MOZAMBIQUE. Photo N F Edwards.

In Angola all the important places are ocean harbours, such as Benguela, Loanda, and Mossamedes.

19. The ZAMBESI DISTRICT is taken to include the two Portuguese provinces along the ocean—Mozambique and Lorenzo Marquez; and including them it has three typical kinds of towns. Mozambique and Lorenzo Marquez are

typical harbours, the latter having in Delagoa Bay one of the finest harbours in Africa; Tete and Sena are river ports; and Bulawayo and Salisbury are political and mining centres, while Blantyre is an old Missionary Station.

20. SOUTH AFRICA, being outside the tropics, has been more suitable than other areas for settlement by Europeans, and the towns are of special importance. In German West Africa, for instance, the small British strip of Walfish Bay contains the best harbour on the west coast of Africa; and Bechuanaland contains typical political and commercial centres in Vryburg (the capital), Taungs, and Mafeking, the importance of which was illustrated in the recent war.

21. The two new colonies contain towns of two kinds. The political centres are generally little market-towns in farming districts, such as Pretoria, Potchefstroom, and Bloemfontein. The commercial centres are great mining towns, such as Johannesburg, Heidelberg, and Middleburg.

22. The towns in Cape Colony are also mainly of two kinds—either harbours, through which all trade enters or leaves the country, such as Cape Town and Port Elizabeth, or farming centres, such as Graaf Reinet and Grahamstown, which supply materials for export. Of course, Kimberley

is an exception, owing its importance entirely to its diamonds.

23. In Natal the chief commercial centres, again, are on the coast, Durban being the only one of real importance; the chief political centres

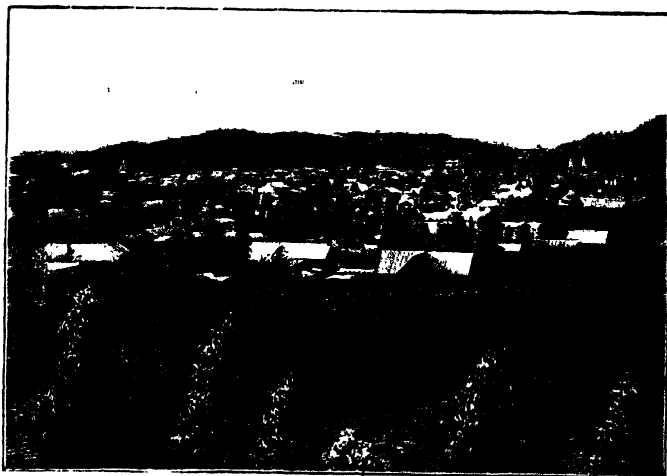


Photo N P Edwards

BLOEMFONTEIN.

are on the healthier tableland, Pietermaritzburg being the only one of real importance; the chief mining centres are up in the mountains, as Dundee and Newcastle. Ladysmith is the commercial centre of the mining district.

24. Most of the towns on the ISLANDS are harbours, such as Tamatave in Madagascar and

Santa Cruz in Teneriffe. But Antananarivo, amongst the highest peaks of the Madagascar mountains, occupies a typical position for the capital of an uncivilised people; and Funchal, on the sunny southern shore of Madeira, occupies a typical position for a health resort.

The Seven Largest Cities.

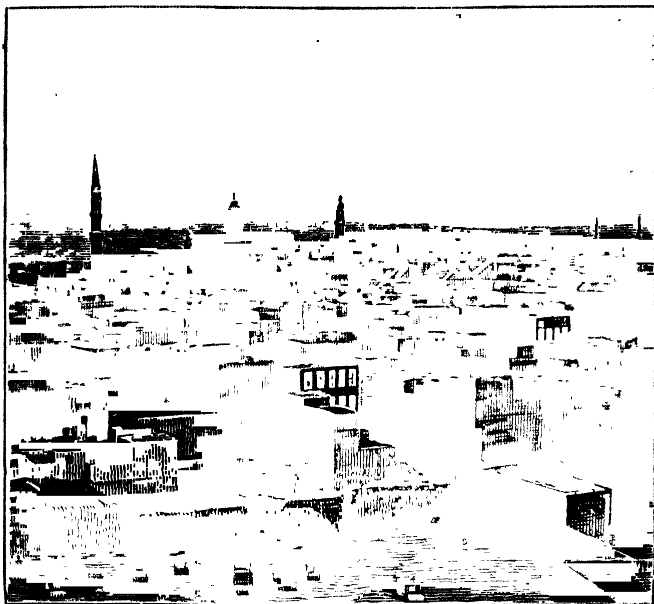
1. Asia contains seven cities with populations of at least one million. The seven largest cities of Africa, taken all together, have not much more than a million; but each of the seven has at least one hundred thousand.

2. Much the largest town is CAIRO, with rather more than half a million inhabitants; and it owes its importance mainly to its position on the 'apex,' as it is called, of the delta.

3. Very long ago there was an immense palace near the site of the modern city; and from time to time 'suburbs' were built on to this palace, until there sprang up a real city. The streets and bazaars—or markets—which occupy the site of this old palace and its neighbourhood, are still the oldest and most picturesque part of the city.

4. The chief changes which have taken place

in the city, are of three kinds. One is that, since English engineers taught the people how to control the floods on the Nile, they are no longer afraid to live near the river; and the



space which was left originally between the city and the river is now covered with villas and palaces, mostly built by Europeans.

5. Another change is the disappearance of some of the most beautiful old ornaments. All

of them were grossly neglected for generations; some of them have decayed naturally; and others have been carried off to foreign lands by travellers who had more money than unselfishness.

6. The third change is the disuse of the old custom of living in 'quarters.' Originally each distinct trade had its own special part of the city, walled off from the rest. Now people live more or less where they like; but the natives live mainly in the north-east, and the Europeans in the west. Consequently most of the mosques, fountains, and latticed houses—which are typical of the old architecture of the city—are in the north-east, surrounding the famous Azhar University, which was founded in 971 A.D., and which now numbers some 2000 students.

7. ALEXANDRIA stands next to Cairo in size, with a population of over 300,000; and, as its name suggests, it was built by Alexander the Great. He did not build, however, the famous 'Pharos' lighthouse off the city, which is usually attributed to him.

8. In the time of the great Queen Cleopatra, the city contained a good many more people—counting slaves—than it does now; but its population has been increasing very rapidly within the last 70 or 80 years, so that its days of depression seem to be over.

9. The depression was due to several causes. The first was the rise of Constantinople as a great rival; another was the terrible struggles between the early Christians and the heathens in the city; a third was that the Egyptian caliphs, or rulers, found that Cairo was a more suitable



Photo N P Edwards.

ALEXANDRIA.

place for a capital; and a fourth was the discovery of America and the Cape route to India, which greatly diminished the trade of all the harbours in the eastern part of the Mediterranean.

10. Most of the modern city stands on a mole or huge embankment, which was built more than 2000 years ago between the mainland and

the 'Pharos' island; and so it has two harbours, one on each side of the mole, with a fine modern lighthouse, the light of which can be seen for twenty miles.

11. Like many old cities which have suddenly become important in modern times, it is a strange mixture of old and new and of European and native. Most of the natives live in filthy hovels in a wretched unpaved part of the city; while the European part has all kinds of modern arrangements and luxuries.

12. The two famous obelisks, or needle-like pillars, which used to stand in Alexandria, and are known as 'Cleopatra's Needles,' have both been removed. One was brought to London, and set up on the 'Victoria Embankment' of the Thames. The other was taken to New York, and set up in the Central Park.

13. The two cities probably next in size, Fez and Marocco, are both in Marocco, as the two largest cities are both in Egypt; but they are not half the size even of Alexandria.

14. Fez, though probably the larger city of the two, is not the nominal capital. For more than a thousand years it has been a 'Holy City,' with a famous Mohammedan University. It is a city of narrow, dirty streets and crumbling

houses, but carries on a busy trade between Europe and Timbuktu. The population is believed to be about 150,000, but the returns of population for these half-civilised places can never be trusted.

15. MAROCCO, the nominal capital, looks very magnificent from some distance; but, when you are inside it, it is a mass of crumbling ruins. The cool streams from the Atlas, the fertile plain of the Tensift, and the command of good routes inland, are sure, however, to make it an important place when once it has passed out of the possession of the Moors.

16. TUNIS, which is sometimes said to be larger than Fez or Marocco, is of course under the French, who have dredged a channel from the city to the Port of Goletta, so that small vessels can now reach Tunis. It is considered by the Mohammedans to be the great centre of fashion, and it is often visited by European tourists who wish to see the ruined site of the ancient city of Carthage.

17. JOHANNESBURG, which comes next in size, is a very different city, being entirely modern. It stands on one of the richest gold-fields in the world, and since 1886 has grown from a small group of 'corrugated-iron shanties' into a city of 100,000 persons. It has connection by rail with

all the chief harbours in South Africa—Cape Town, Port Elizabeth, East London, Durban, and Lorenzo Marquez.



Photo N. P. Edwards

MARKET SQUARE, JOHANNESBURG

18. ANTANANARIVO is said to have about the same number of inhabitants as Johannesburg, but the two towns have no other points of likeness. The French have kept Antananarivo, which was the old 'Hova' capital, as their own modern capital of Madagascar; but it has nothing really to recommend it except that its position made it a safe refuge for a half-civilised race.



HOVA CAPITAL.

Some other Interesting Cities.

1. Amongst the smaller cities of Africa are some which are, or will be, probably nearly as important as any of these larger ones, the most important at present being Cape Town, Algiers, and Zanzibar.

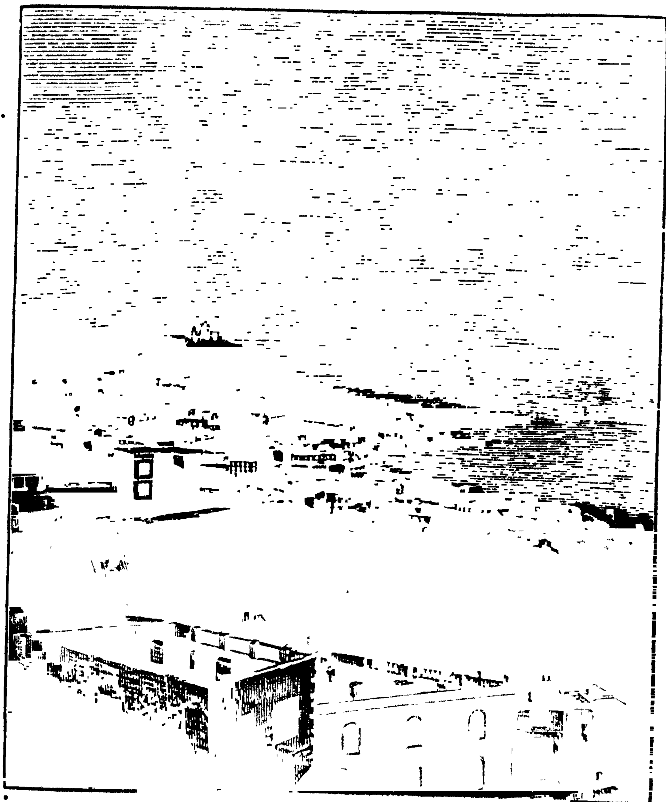
2. CAPE TOWN has been exceedingly important ever since it was founded by the Dutch more than 200 years ago. It used to be just a calling place for vessels on their way to India and Australia; and, ever since the opening of the Suez Canal, it has been very important in the Australian trade.

3. In appearance it is very like an English town, but rather more imposing to look on than most of our towns. It stands at the foot of Table Mountain—so called from its flat top; and, when the wet winds from the sea are condensed into mist on its peak, which is just the height of Snowdon, it is said to 'have its tablecloth on.'

4. Table Bay was not always a very safe harbour, but a breakwater was erected and docks were constructed—at a total cost of more than £2,000,000—so that now it is both safe and convenient.

5. ALGIERS is seven hundred years older than Cape Town, but it is only since the opening of the Suez Canal that it has become really important. It rises steeply from the seashore to the old fortress of the Deys on the top of the hill, the old part of the town being entirely Moorish, while the new part is French. The old harbour was formed by building a mole joining four

little islands together and to the shore; and so the place was called *Al-jezair*, 'The Islands.'



ALGIERS FROM THE MARENGO GARDENS. Photo N P Edwards

6. In modern times the French have immensely improved the harbour, adding large

docks and very strong fortifications; and it has now a busy trade. Its fine climate and the nearness to Europe have also caused it to become a favourite health resort for Europeans who are suffering from chest diseases.

7. ORAN, the other great harbour of Algeria, probably ranks next to Algiers in size; and, like Algiers, it spreads up a steep hill from the shore, —it is very French in appearance,—and its harbour has been much improved by the building of a mole.

8. PORT SAID is a place which had no advantages of climate, soil, or position until the cutting of the Suez Canal. The climate is still bad, and the soil barren, but the position is one of the most important along the whole canal. In fact the place owes its origin and prosperity entirely to the canal.

9. DURBAN has always been an attractive harbour, for it stands inside an almost landlocked bay; and its climate has always been fairly good. But in recent times careful attention to proper drainage and clearance away of rubbish have made the place much more healthy, and extensive harbour works have made it immensely more useful and important.

10. ZANZIBAR, like so many of the African

harbours, is on an island—on the side looking towards the mainland. This was an excellent place for slave-traders to have their headquarters, especially as it commanded the best routes inland for bringing slaves down to the coast. In 1890 it was made a British Protectorate, which ruined the prospects of the slave-traders.

11. FREETOWN has had a very different history. As its name may have suggested to you, it became a refuge for freed slaves; and nearly half the population of Sierra Leone, of which Freetown is the capital, consists of the descendants of these slaves. The name of the neighbouring area, *Liberia* (= 'Free Land') shows you that it too has been a refuge for negroes.

12. TANGIER, like Algiers, is both a health resort and a great trading centre—though its harbour is a bad one. It is most interesting, however, for its history. Its Moorish inhabitants were such troublesome pirates in old days that the Portuguese attacked and took the place, and it was given by them to King Charles II. of England, as part of the dowry of his wife, who was a Portuguese princess. Afterwards the blackguardly Colonel Kirke was the commander of the garrison there, and the saintly Bishop Kerr was the chaplain.

PART V.

HISTORICAL, ETC.

Exploration.

1. In the preceding pages you have had some references to the history of this great continent, but the chief subject has been the political and commercial geography of it. We may now learn some further details about the history and about some of the typical people, plants, beasts, ruins, etc.

2. The most curious thing about the history of the continent is that, although it is part of the Old World and has been known to Europeans for more than 2000 years, it was for many centuries very little more than a name. Nothing at all was known accurately about the interior of the continent, and not much was known even of the coastlands towards the south.

3. There were several good reasons for this curious state of things, and we may discuss two

or three of them; but you must remember that what we shall learn does *not* apply to Egypt, which was an exception to the rest of the continent. You can see even in the Bible that



Photo. N P Edwards

A MOOR.

Egypt was not an unknown land as much as 4000 years ago.

4. If you look again at the map, and remember that the early explorers came from Europe, you will easily understand that the great obstacle to their getting far inland and learning about the interior of the continent, was that this interior was the great Sahara Desert. Even now, if

there were no camels, it would be almost impossible for any one to cross the Sahara; and, before the invention of the compass, it was very dangerous to try to explore coasts 5000 miles away from Europe—which is the distance to the south of Africa.

5. There was another reason why it was not easy to explore even the north of the continent; and that was the fact that, not very long after the time of Muhammed, the Arabs extended their power over the north of Africa. They were exceedingly hostile to strangers, especially Europeans, and prevented any exploration even of the lands along the Mediterranean.

6. In what is called the Mediaeval Period of European History, the nations seem to have been always more or less asleep; but in the time of Columbus and Cabot they began to wake up. Then came an Age of New Learning, in which you find them using printing, the compass, and gunpowder; and there was a wide-spread desire to explore the unknown parts of the world.

7. You might think that, as the Arab power in Africa was much weaker than it had been, the explorers would naturally turn to the continent nearest to Europe. But by this time all the chief harbours along the Mediterranean coast of Africa had been seized and fortified by a tribe of

very savage pirates called the "Barbary Corsairs"; and these pirates not only prevented Europeans exploring Algeria, Morocco, and other parts of north Africa, but were even a terrible danger to Europe itself.

8. Even when these difficulties were overcome, and Europeans could begin to explore Africa, it was still a very difficult country to open up—for geographical reasons. We have noticed how little broken its coast is, so that harbours are very few and far between, and how the high edge of the continent causes nearly all the rivers to be impeded by great falls and rapids.

9. Of course, if the Europeans could just have settled round the various harbours, and then gradually spread inland, that would have opened up the country. But the coastlands round most of the harbours are excessively unhealthy—for instance, you may remember the "White Man's grave" in Sierra Leone; and in those days very few of the remedies were known by which we now make it possible for Europeans to live in these places.

10. One other point must be noticed. In most of the continents there was known to be something far inland which was thought by Europeans to be worth running great risks for. If you have never read of all the wonderful things which the

English and Spanish adventurers found and fought for in Mexico and Peru, you should read about them the very first opportunity you have. But in the interior of Africa there were none of these riches, and the only motive for exploring the country seemed to be curiosity.

11. Of course, the Egyptians themselves must have known a good deal about the north-east corner of Africa; and the Carthaginians certainly knew something about the Atlantic coast. Some of their knowledge was recorded in a book by an old geographer called Ptolemy, who lived at Alexandria; but the real discovery of the continent began with Prince Henry of Portugal, who was called "Henry the Navigator," and who was a grandson of John of Gaunt, Duke of Lancaster.

12. After the Prince's death other Portuguese explorers carried on the work, until a man called Diaz, in 1483, actually reached the Cape of Good Hope; and Vasco da Gama and others soon finished a rough exploration of the main outline of the coast.

13. The interior was naturally a matter of far greater difficulty, and nothing much was done for 300 years. Then an enterprising Scotchman, called James Bruce, started from Massowah, and travelled right up to the source of the Blue Nile, which he thought was the main source of the

whole river. Unfortunately, his story was not believed, and he was so much ridiculed that many years passed before any one tried to prove that his story was true.

14. About the same time an effort was being made to explore the Niger, another river which was mentioned in Ptolemy's Geography. In this case, it was a Sir Joseph Banks, who had been with Captain Cook in his first voyage, that was most interested; and he raised money for an attempt to explore the Niger.

15. Eventually the course of the upper parts of the river [Look out on the map which way this upper part runs] was actually explored by Mungo Park; but in trying to explore the lower part he was wrecked, and he and all his friends were drowned.

16. By degrees, however, the northern half of the continent became more or less known, mainly through the work of a Captain Clapperton; and then it was realised that probably the whole problem would be solved if only four separate well-organised attempts were made on the four great rivers—Niger, Nile, Congo, and Zambesi, the Niger being the most difficult because it was broken up into so many mouths, and its delta was so densely covered with jungle, that it could not be traced back from the sea.

17. At last the problems about the Nile and the Zambesi were solved about the time of the Crimean War, mainly by four men—Dr. Livingstone, Captain Burton, Captain Speke, and Sir Samuel Baker. But in the course of his journeys Dr. Livingstone was lost. After nothing had been heard of him for several years, the proprietors of the *Daily Telegraph* and the *New York Herald* sent out Mr. Stanley to try to find him. He was found near Lake Tanganyika; and then Mr. Stanley, continuing his travels, had the good fortune to solve the problem about the Congo in a single journey.

Some of the Native Races.

1. As you have already learned, most of the natives of Africa are dark-skinned, but they are not all the same colour. And, if you examined the shape of their heads, their hair, and their faces, you would find that some of them were not at all like the others except in their general dark colour.

2. Perhaps it may sound very strange, but it is true—that the natives of the north part of the continent, in spite of their dark skins, are really *White* Men. In fact, most of them are of the same race as is found in Arabia; and their dusky colour may be called a kind of 'sunburn.'

3. The people in the middle and south of the continent are mainly *Black* Men or real Negroes, with thick lips, curly hair, flat noses, and so on. The home of the Black Man is probably the lower basin of the Niger (the "Black" River), and so the people of the Sudan are Negroes; but there is another tribe of Negroes, to which we have already referred, called the Bantu, and perhaps the famous Pygmies are Negroes.

4. These Pygmies are dwarfs who live in the dark forests of the Congo region. As they are so small, they have to rely on their cunning instead of their strength; and so they are very treacherous, using poisoned arrows, and being of course very hard to see—and still harder to catch—in the thick jungle of the forests. These parts are exceedingly dark, and the small size of the Pygmies is perhaps due to their having lived for generations in this darkness.

5. The tribes most interesting to English people are the Hottentots and the Zulus, the latter being much the more important. Some of the Hottentots are sometimes called Bushmen, and the Zulus are sometimes called simply Kafirs.

6. The Hottentots are a stupid, ugly, dirty people, who are supposed to be the descendants of the original inhabitants of the continent. Their

language is full of curious "click-click" sounds, and is really not unlike the cackling of geese at a short distance. They used to wear, as clothes, sheep-skins turned inside out; and they were very fond of greasing themselves. They are now gradually learning other customs, but they are happiest when wearing their old skins and grease and lolling about in the circle of 'bee-hive huts' which they call a *kraal*.

7. The Bushmen are, perhaps, simply very bad specimens of the Hottentot races. At any rate, they are very little better than savages. They are almost dwarfs, and—like the Pygmies—they use poisoned arrows. They generally live in caves, and their one talent is for painting pictures on the walls of their caves.

8. All the finer tribes of South Africa are called Kafirs. They are tall and strong; they make splendid soldiers and hunters, nearly every Kafir having a leopard-skin; and their religion is exceedingly cruel. Their special weapons are clubs, short spears called 'assegais,' and 'knob-kerries' or sticks for throwing; and they carry large ox-hide shields, which are a great protection against 'knob-kerries.'

9. The finest of these Kafir tribes are the Zulus, who are really trained warriors. For the last hundred years every boy in the tribe has



ZULU CHIEF IN FULL WAR DRESS.

been trained up to think of nothing but fighting; and no one was allowed to marry until he was able to curl his hair—a sign that he had killed an enemy. They were enrolled in regular 'impis' or regiments, and all were pledged to die for their king.

10. Exceedingly brave men who have been well trained, and who prefer death to defeat, make most formidable soldiers, even when not supplied with fire-arms. And, unlike most dashing warriors, the Zulus were trained also to very stealthy movements; and they generally 'surprised' their foes, guiding their regiments to the attack by imitating the cries of wild beasts.

11. The battles were generally scenes of terrible slaughter. Each Zulu, as soon as he had speared an enemy, tore his heart out of his body before he was dead; and, when the killing was over, they would drive off the cattle and children of their victims, and celebrate the victory with feasting and horrible dances.

12. When they had no one else to fight with, they would keep themselves in training by fighting with one another; and in one way and another they were such a danger to all peaceable people in the neighbourhood that at last we had to make war on them. The war ended in the complete defeat of the Zulu King, Cetewayo,

and the break-up of his kingdom; but not before we had suffered a terrible disaster at Isandula.

Some of the Native Animals.

1. Besides the 'economic,' that is, the useful, animals of Africa, such as the camel, ox,



THE HIPPOPOTAMUS.

sheep, and goat, there are several which, though not so useful or even not useful at all, are more typical of Africa. Amongst these are the lion, the leopard, the buffalo, the zebra, the giraffe, the hippopotamus, and the ostrich.

2. The home of the lion is in Africa; and, though lions are getting much rarer than they

used to be in most parts of the continent, they may still be found without great difficulty. There are several kinds of lions in Africa, such as the Barbary lion and the Cape lion ; but they are all alike in disposition. They hunt chiefly at night, and, unless they are starved with hunger, they will not eat anything which they have not killed themselves. They belong to the 'cat' tribe, and creep, crouch, and spring on their victims as cats do ; but they are less like cats than the 'tigers' are.

3. These 'tigers,' as the Dutch call them, are not real tigers at all, but leopards. Like the lions, they will not voluntarily attack men ; indeed, they are so shy that it is difficult to get a shot at them, and they are generally trapped or poisoned. Like cats, however, they can climb trees, and often do so both for refuge and for ambush; and in this way they catch the monkeys to which they are so partial.

4. The buffalo is also a dangerous beast, for it is exceedingly ferocious when attacked; and, as it is larger and stronger than the ordinary ox, and as the particular kind known as the 'Cape buffalo' has an immense pair of heavy horns, it is a most formidable enemy.

5. The pretty little species of horse which is known as the zebra, is becoming very rare ; and



BUFFALO AND LIONS.

unfortunately it does not thrive as a captive. There are still scattered herds here and there, for the little animals are very swift and wonderfully watchful ; but Africa is being occupied by Europeans so fast that practically all the wild animals are doomed.



6. One exception may be the giraffe, the tallest of all beasts, because it is quite happy as a captive and very harmless. Its great height, which sometimes reaches *20 feet*, makes it ugly, but enables it abler to get abundance of its usual food—the leaves of trees. Indeed, it is said that the length of the neck is due to the fact that

those with the longest necks have been able to get most food, and so have had the best chance of surviving.


GIRAFFE.

7. Baboons are very common and a great nuisance. They are not dangerous to men, though they chatter and bark and throw stones at you; but they do a great deal of mischief in fields, gardens, and orchards, and even kill goats—*not* in order to eat their flesh, but in order to drink their milk!


PUFF ADDER.

8. Poisonous snakes are still far too numerous for comfort and safety. The worst is probably the Puff-Adder, which gets its name from its habit of *puffing* out its neck when angered or alarmed. But these reptiles have two great enemies—pigs and a particular kind of bird called The

Secretary Bird, because it has bunches of feathers behind its ears which look like quill-pens. The snake poison, though so strong that the Bushmen tip their arrows with it, seems to have no effect whatever on the pigs, for they just munch up the snakes alive; the Secretary-Bird kicks them insensible before eating them.



THE SECRETARY-BIRD.

9. Two other terrible plagues are the Tsetse fly and the locust. The Tsetse fly is a kind of gad-fly, which does no harm to human beings and wild beasts, but is fatal to most horses and cattle. In fact, it was one cause of the slave trade, for the chief slave districts were those in which the Tsetse flies were so deadly that horses could not be used for transport.

10. The locust is a kind of grass-hopper, and in America locusts are generally called grass-hoppers. As they live on the leaves and green stalks of plants, and move about in countless

swarms, they are very destructive. A swarm will strip a field perfectly bare in an hour, besides leaving millions of eggs behind them in the soil. Flocks of birds follow them, and the antelopes and other small animals "eat them by lumps" when they settle on the ground, and some tribes even cook them; but nothing seems to stop them or to keep down their numbers.

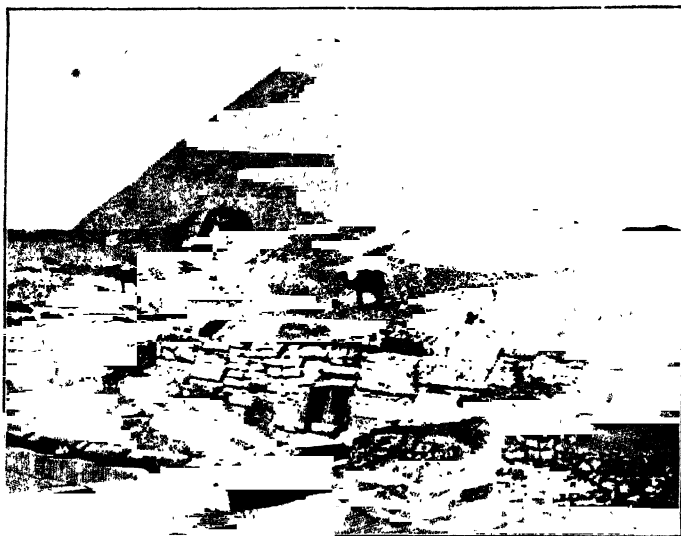
The Pyramids.

1. These famous monuments are in Egypt, and the largest and finest of them are found in groups between the west bank of the Nile and the Libyan Desert, the farthest north being opposite Cairo.

2. They are built chiefly of the hard limestone of the neighbouring hills, but they contain also large blocks of granite which must have come from near Assouan, and it must have been a task of immense difficulty to bring such huge weights all that distance.

3. The pyramids are four-sided, the four sides facing exactly the four points of the compass; and there are other signs that the builders used exact mathematical measurement and had a profound knowledge of astronomy, although the oldest of the buildings must be at least *5000 years old.*

4. The chief group is at a place called Gizeh, *near Cairo, and consists of nine pyramids of different size, the largest of which is called* The Great Pyramid.



THE GREAT PYRAMID.

5. According to the old Greek historian, Herodotus, this pyramid was built by a king called Cheops, and occupied *100,000 men for 20 years* in actual building, and another 100,000 for 10 years previously in making the road along which the stone was brought.

6. Originally it was nearly 500 feet high, and

each side at the base measured 768 feet in length. The pointed *top and the smooth coating*

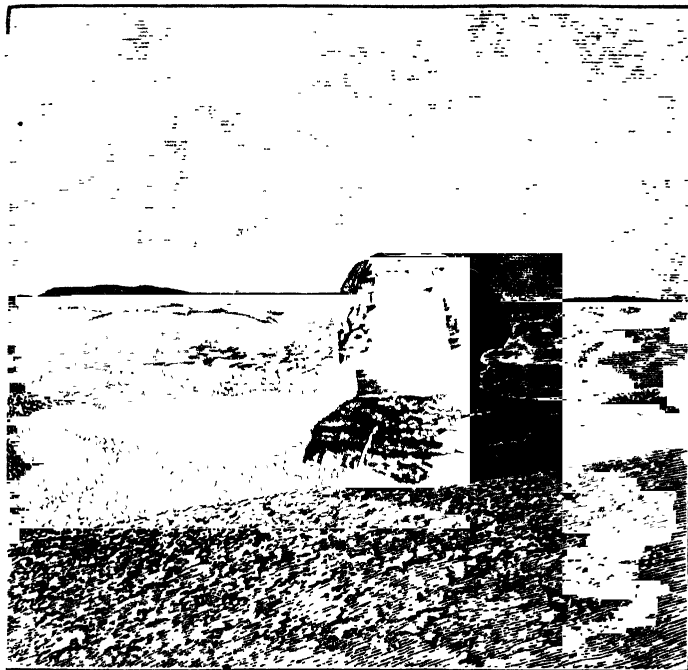


Photo N P Edwards

THE GREAT SPHINX.

of the sides have been lost, but the pyramid is still 450 feet high, and occupies a square of 13 acres.

7. In the centre there is a small room, which was the tomb of the king. The pyramids were

built by the kings, partly for their tombs and partly as memorials of their greatness. And the size of the pyramid generally depended on the length of the particular king's reign. It was generally begun the first year of the reign, and was stopped at his death, except for the filling up of the various 'steps' so as to make the sides perfectly smooth from top to bottom.

8. This filling up of the steps was done in order that any rain might at once run away down the slope without leaking through into the building. Of course, there is very little rain in Egypt, but there is occasionally a terrific downpour during a thunderstorm.

9. Close to this Great Pyramid is the most famous of the various monuments which bear the name of the Sphinx—an imaginary monster with the body of a lion and a human head. This 'Great Sphinx' is about 150 feet long and 63 feet high, and the whole of its body is cut out of a single stone.

GEOGRAPHY OF AUSTRALASIA.

PART I.

GENERAL GEOGRAPHY OF AUSTRALIA.

1. During the seventeenth century the coasts of Australia were explored by various Europeans —Portuguese, Spanish, and Dutch; and the Dutch even gave the continent the name of New Holland, and claimed it as their colony. But, as a matter of fact, no real settlement was made by any European until the time of the famous Captain Cook.

2. In 1770 Captain Cook began to definitely open up the eastern coast, and he advised the English Government to use the place as a convict station. This was done, and the first body of convicts was landed in Botany Bay in the year 1787.

3. For twenty years or so the settlement consisted entirely of convicts and the soldiers and

police in charge of them. But by degrees free



CAPTAIN COOK.

colonists began to visit the country, and most of the convicts, when their time of punishment had

expired, began to farm in the colony instead of returning to England, where their names were dishonoured.

4. There were several reasons why Australia seemed to be a suitable place for a convict settlement. It was, for one thing, a very long way from England; it was also thought to be a very poor country, where the convicts could get no luxuries and had no chance of ever becoming rich; and, above all, it was inhabited by a very savage race of Blacks.

5. All these causes have been much altered during the last century. Of course, the distance from England is still the same; but the cutting of the Suez Canal and the invention of steamers have greatly lessened the *time* taken to get there. Then the country has been discovered to be very rich in minerals, and to be able to produce enormous quantities of wool. Lastly, the Blacks are rapidly dying out, and are no longer a danger.

6. It is sometimes said by people who seem to be always willing to believe hateful things of their countrymen that the disappearance of these Blacks is due to their being killed off by the English settlers. But this is not true. In defending their sheep, which the Blacks used to spear, the settlers did kill some of the Blacks,

but most of them have died from drink, or in quarrels amongst themselves, or from the spread of infectious disease.

7. The discovery of gold in 1852 proved to be a notable event in the history of Australia; and



the completion of the telegraph line in 1872 right through the middle of the continent, from Port Adelaide in the south to Port Darwin in the north, gave great impulse to exploration.

8. The "Gold fever," though it led to much disorder at first, in the end ultimately made Australia a nation. Many persons made rapid

fortunes; but many more, who came to dig for gold, remained to till the soil, and tend the sheep and cattle.

9. The first settlement in 1788 included a population of about 1000 persons. By 1851 the number had risen to 350,000. The discovery of gold in that year caused an immense inrush of people from all parts of the world, and the population went up by leaps and bounds. At present the settlers and their descendants, all speaking the English language, number above 3,000,000.

10. New South Wales was the parent colony of Australia, and included all the settled districts in the eastern half of the continent, together with the island of Tasmania. Victoria was cut off, and made independent in 1851, Tasmania in 1855, and Queensland in 1859. The settlement in West Australia commenced in 1829, and South Australia was made a separate colony in 1834.

11. For a long time the settlements in New South Wales were confined to a broad strip of land lying between the mountains and the sea: but when it was discovered that the western slopes of the mountains formed good sheep-runs, numbers of sheep farmers settled there.

12. Other fertile parts were gradually opened up, and some knowledge was acquired of the

vast interior. But the dense heat, the want of water, and the terrible 'scrub,' combined to make the work of exploration both difficult and dangerous.

13. It was not till the year 1862 that any explorer succeeded in crossing the continent, except near the coast. In 1860 the Government of South Australia offered a reward of £10,000 to any one who should succeed in making a journey through the middle of the country from south to north. Mr. Sturt, with a party of nine followers, undertook the task, and was successful in his third attempt. Following the route taken by Sturt, a telegraph line was constructed from Adelaide to Port Darwin. This line connects all the principal cities of Australia with London.

14. The fixed stations of this telegraph line, where food and water supplies could be obtained, offered tempting starting-points for new explorers. Previous to 1872 the whole of the vast area, nearly one-third of the whole continent between the telegraph line and the West Australian settlements was a blank. It had been penetrated in several places for some distance; but all the explorers alike had been driven back by want of water, and other difficulties.

15. Since then several journeys have been

made across this inhospitable land, and the general result of these and other explorations is to show us that about one-half of this whole island-continent is absolutely unfit for habitation by Europeans.

Surroundings.

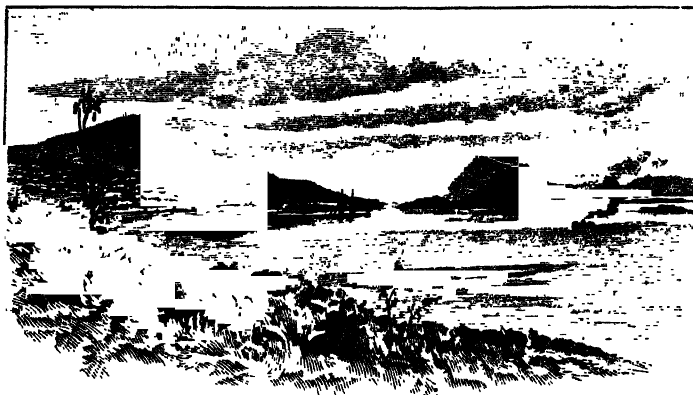
1. You may consider Australia as the smallest continent in the world or as the largest island; and the sea round it has so little effect on it that it is better to call it a continent than an island.

2. The main reason for this 'continental' character is that there are very few large openings in the coast. There are numerous small openings in the east and the north, and some of them make very good harbours; but they are not large enough to affect the climate inland, and there are long stretches of coast without any opening of any kind.

3. The worst part of the coast is in the south and south-west. From Cape Leeuwin to Cape Catastrophe there is only one good harbour—the little town of Albany on King George's Sound. The rest of this part of the coast is mainly an unbroken wall of rock from 200 to 600 feet high. The land behind it is practically one continuous desert, and the sea in front of it is full of sunken rocks. Cape Catastrophe itself

was so named by the explorer Flinders because the crew of a boat which he sent to look for fresh water were all drowned there.

4. From Cape Catastrophe to Cape Howe the coast is much more useful; but the openings which *look* the best on the map, are not really

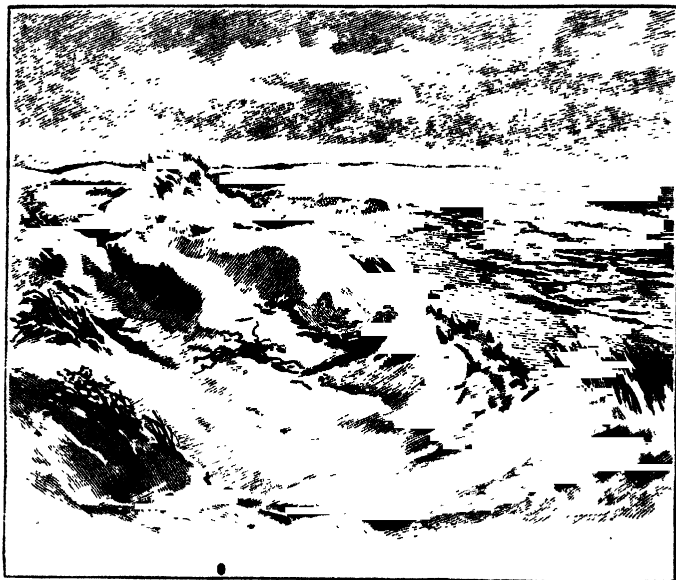


KING GEORGE'S SOUND.

the best. For instance, the Gulf of Spencer which looks like a splendid estuary up which you might expect to find a route inland along a large tidal river, is shallow and shoaly; and the Gulf of St. Vincent, so called after one of the greatest English admirals, is not much better, though its entrance is well protected by Kangaroo Island.

5. Between Kangaroo Island and Cape Otway, where there is a very fine lighthouse, there are

few important harbours. Even the great estuary of Encounter Bay is not valuable, for the Murray river becomes so shallow during the dry season that it is useless for ships. But there is a curious



SAND DUNES, ENCOUNTER BAY.

lagoon called the Coorong running along the shores for miles.

6. But, to compensate for all these drawbacks, the colony of Victoria has in Port Phillip one of the first harbours in the world. It is about 40 miles long and nearly 40 miles wide, and is shut

in by land all round except for the few hundred yards at the entrance from Bass Strait. The great capital of Melbourne stands at the head of the bay, with nearly 20 miles of piers and quay.

7. From Wilson Promontory, which is the most southerly point of Australia, to Cape Howe, the coast is again destitute of harbours, but has a strip of lagoons like the Coorong ; and in front of the lagoons there is a long stretch of low sand-banks which is known as the Ninety Mile Beach.

8. Between Cape Howe and Cape Byron, which is the most easterly point of Australia, there are several very good harbours, of which Botany Bay is one ; but they are very much neglected because of the extraordinary excellence of Port Jackson, round the shores of which the great harbour of Sydney has sprung up. It is one of the most beautiful and most useful harbours on the face of the earth.

9. Between Cape Byron and Cape York, the most northerly point in Australia, there are no very fine natural harbours ; but Brisbane and Rockhampton are useful ports, and the protection of the Great Barrier Reef enables even un-sheltered roadsteads to be used as ports with safety. This reef is a huge bank of coral nearly 1000 miles long, which forms an impenetrable barrier to the mighty 'rollers' of the Pacific Ocean.

10. Between Cape York and the North West Cape there are hundreds of miles of dreary useless mud-flats, very unhealthy and practically uninhabited; but behind the twin islands of Melville and Bathurst there is the fine harbour of Palmerston, the only important place in the whole of the north coast of the continent.



THE GREAT BARRIER REEF.

11. Between North West Cape and Cape Leeuwin, again, there are no good natural harbours; but Shark Bay is well sheltered, and Freemantle is a busy port, through which passes nearly all the trade of Perth and the gold-mining centres of Coolgardie and Kalgurli. Steep Point, off Shark Bay, is the most westerly point in Australia.

Surface.

1. It is often said that the cross-country telegraph line from Port Augusta to Palmerston divides Australia into two parts, of which the eastern is known and mainly inhabited by White men, while the western is unknown and mainly inhabited by Black men.

2. This is not quite accurate; but you can see on your map that a very large portion of Western Australia is desert, such as the Great Sandy Desert and the Great Victoria Desert. This does not imply that the land is low and flat; most of it is just the contrary. But the ranges of hills are not high enough to affect either the climate or the scenery of the country, considering its huge size.

3. The eastern half of the continent is certainly much better known and much more useful, and it has one remarkable feature. This is a belt of tableland running parallel to the coast right round from Arnhem Land, through Queensland and New South Wales, to the extreme west of Victoria. All the continent slopes down inland from this belt of tableland into a sort of huge saucer-shaped depression.

4. The width of this tableland is generally between 60 and 100 miles, so that it affords

plenty of land for farming when the climate and soil are suitable; and its general height is about 2000 feet, though it does rise to more than 7000. The higher parts are called mountain ranges, and



THE AUSTRALIAN DESERT.

from the sea they look like mountains; but from the tableland itself they seem quite small and insignificant.

5. It is possible along all the 2000 miles of this belt of tableland, to trace one definite continuous ridge; and this ridge is called generally The Great Dividing Range, though it has also

different names in different places. For instance, up near Cape Melville it is called the Bellenden Ker Range; in the south of Queensland it is called the Denham Range; in New South Wales it is known first as the New England Range, then as



ZIG-ZAG RAILWAY, BLUE MOUNTAINS.

the Liverpool Mountains, and then as the Blue Mountains. In the south-east corner of the continent it ends in the Australian Alps, the Grampians, and the Pyrenees.

6. This Dividing Range owes its chief importance to the fact that it "divides" the lowlands along the coast from the plains of the interior of

the continent, and so prevents the rain-clouds from floating inland. As the clouds rise on the seaward side of the Range to pass over it, they drop their rain, and have none left for the great plains of the interior.

7. The result of this is that there is not enough moisture inland for ordinary farming, and the land often looks like one huge desert of sand. But now and then thunder-storms bring showers of rain with them, and the dew is very heavy, so that it is possible for grass to grow; and besides the grass there are several kinds of shrubs which can flourish, especially one called the 'salt-bush.'

8. These various plants supply enough food for sheep, especially after rain has fallen, and the plains are covered by immense flocks; but in very dry seasons even this food fails, and then millions of sheep die. I have known of more than *twelve million* sheep dying from want of food and water in a single season. And, as these droughts come fairly often, sheep-farming is very risky work.

9. I daresay that you can guess from what we have just said, that the rivers of Australia must be rather curious, and that they must sometimes dry up altogether. But you may be sure that the coast rivers are different from those of the

interior, for we saw that there was plenty of rain along the coast; and along the east coast, where there is most rain, and where the rain falls most regularly, the rivers generally are full of water, though they are too fast to be useful for navigation.

10. If you look at your map, you will see that most of the rivers *of both kinds* rise in the Great Dividing Range, which is very near to the sea; and, therefore, the rivers which flow across the coast-lands, are much shorter than those which flow inland. Some of the coast rivers, however, do not flow straight towards the sea, but wind about a great deal, and this increases their length —for instance, the Burdekin and the Hawkesbury run for a long distance *parallel* to the coast.

11. None of these coastal rivers, however, are very much longer than the Thames or the Shannon, but the inland rivers have very much longer courses. The most important of them are the Murray, the Murrumbidgee, the Darling, and the Cooper; but you may have noticed that the Cooper is called a *creek*, on the map, not a *river*.

12. The reason for this is that for eleven months out of the twelve the 'river' is simply a long ditch, with a little, almost stagnant water

in it; but, if the autumn (*February*) rains do not fail, it becomes for the one month a huge river *seven miles wide*, the water from which expands the 'Lake' Eyre marsh into a real lake as large as Wales.

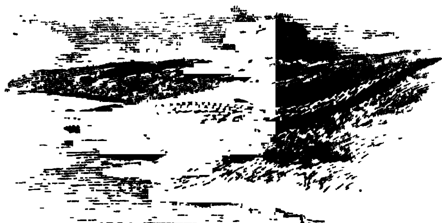
13. The same is more or less true of the Darling also, though the nearer you get to the



THE MURRAY RIVER.

south-east corner—where the Australian Alps rise to more than 7000 feet—the more certain and more copious is the rainfall. For instance, the Darling in flood is *ten miles wide*, and for several months it may be at least one mile wide; but in the end, like the Cooper, it practically dries up.

14. As we proceed, you will be able now to guess what will happen. The next large river towards the south-east is the Lachlan. It is very seldom dried up, and it does not flood to the same extent as the Darling, while the Murrumbidgee, of which it is a tributary, never dries up and always has quite a strong current.



AUSTRALIAN CROCODILE.

15 The Murray is still better than the Murrumbidgee, for it actually rises round Mount Kosciusko; but even the Murray varies very much in depth. Unfortunately, too, it brings down a great deal of mud in flood time, and then ceases to be strong enough to carry the mud clear out to sea. The result is that it becomes really a series of lagoons, one of which is called Lake Alexandrina, and the entrance from the sea to these lagoons is blocked by a great 'bar' of sand.

16. These lagoons are very like the other so-called 'lakes' of Australia, the most im-

portant of which are Lake Eyre, Lake Torrens, and Lake Gairdner. On the map they *look* like noble sheets of water, and so they are sometimes —during floods. But they are generally salt swamps, or even plains of salt-covered mud.

Climate and Productions.

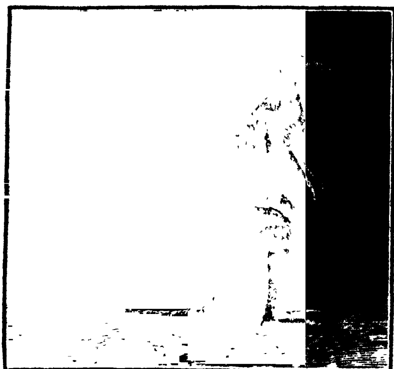
1. The climate of Australia is quite healthy in most places, but it has none of the fine, bracing cold of Canada. It is never really *cold* in any inhabited part of Australia during the day, and in all parts it is sometimes really *hot.*

2. There is, of course, 'a winter' season—which comes during our summer—and in the winter there are sometimes showers of snow all along the edge of the great Dividing Range for hundreds of miles. In the south the snow even falls regularly on the higher mountains, and sometimes lies there for six weeks; but still the days are warm and bright, and the snow in no way interferes with the work or traffic of the people.

3. The summer, on the other hand, is often very trying, even in the south. The sun is very hot, and hot winds blow *outwards* from the desert, carrying with them tons of dust and drying up even the moisture in one's skin. These winds, however, though causing very great discomfort,

are quite healthy, and even destroy the germs of various diseases. The most trying thing is that, after days of intense heat, there are nights of intense cold.

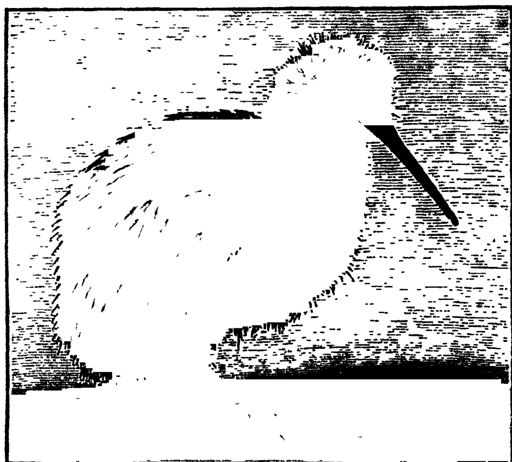
4. In such a curious climate you may expect to find curious plants and even curious animals, and you will not be disappointed, for the country is full of all kinds of curious plants and animals. For instance, among its native plants, flowers have no scent; ferns grow as tall as telegraph posts; trees throw no shadow; and cherries have their pips outside.



5. Similar curiosities may be found amongst the native animals, both of Australia itself and of New Zealand. For instance, the platypus lays eggs and the kangaroo 'walks' on two legs, the kivi bird wears hair instead of feathers, the emu runs instead of flying, eagles are white and swans are black, and small birds do not sing.

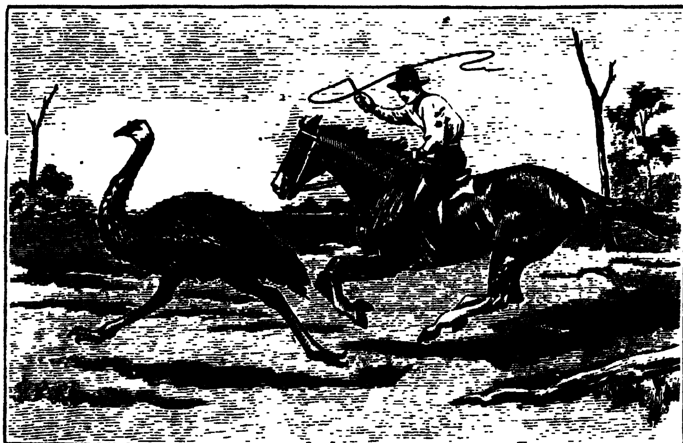
6. The trees which throw no shadow are various kinds of eucalyptus or gum-trees, and the reason

for the absence of shadow is that they open their leaves sideways, rather like Venetian blinds. There are 'red,' 'blue,' and 'white' gums, the red being most useful as timber and the blue giving the famous eucalyptus oil. Some of them are more than 400 feet high. They shed their bark instead of their leaves.



7. Next to the various kinds of eucalyptus, the commonest trees are various kinds of acacia or 'wattle-trees.' They are not so valuable as the gum-trees, though their bark can be used for tanning leather: but they are much prettier, and their crowds of beautiful blossoms have a very delightful scent.

8. Another remarkable tree is the beefwood or shea-oak. This is a leafless tree, whose long, drooping, stiff branches, resembling those of our 'horsetail' plants, render it the most singular and picturesque object of South and West Australia. The wood is as good as our oak, and of

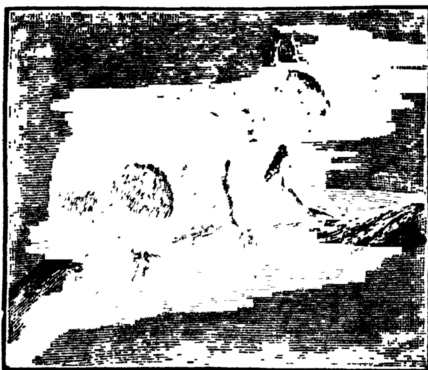


the colour of raw beef, whence its name. Another West Australian tree is the Jarrah, or Swan River mahogany, very valuable for its timber.

9. The grass-tree, too, forms a notable feature. It has a rugged stem, from two to ten feet in height, topped with a tuft of drooping wiry foliage, from the centre of which rises a spike not unlike a huge bulrush. In winter this spike

is covered with white starlike flowers. A heath, dotted with these grass trees, has an appearance at once singular and beautiful.

10. Though the plants of Australia are strange, the animals are stranger. Most of them are distinguished by a curious pouch or bag of skin hanging from the breast of the female, in which



NATIVE BEAR.

the little ones are carried and fed till they are old enough to take care of themselves. All the animals of this kind are called marsupials (from a Latin word *marsupium*, 'a pouch'), but the various kinds have different names, such as kangaroo, wallaby, and opossum. They used to be exceedingly numerous; but, as they are grass-eating creatures, they have been slaughtered pitilessly by the sheep-farmers.

11. The largest of the pouch-carrying animals are the kangaroos, of which there are about 40 different kinds. The kangaroo does not run on "all-fours" like the horse or the cat, but uses its hind-legs for leaping, just as the frog does. The small and feeble fore legs, and the long and stout tail, help the animal to keep its balance. The largest of the kangaroos is about the height of a man.

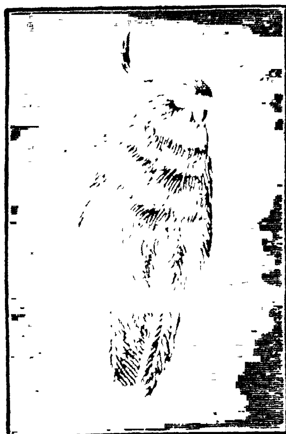


DINGO.

12. The opossums are a large family of squirrel-like animals which live in the trees and feed on leaves. In the daytime they sleep in the hollows of the tree-trunks. At night, especially on moonlight nights, they are most active. The flesh of the opossum is a favourite article of food with the natives of Australia. Their skins form an article of commerce. Some of the species of opossums are as large as a hare, others are as small as a dormouse.

13. The so-called "flying opossums" are beautiful creatures. The largest species, which are nearly black, are larger than the ordinary

cat. The smallest specimen, the "flying mouse" of the colonists, can sleep comfortably in a pill box.


COCKATOO.

14. The egg-laying platypus is covered with fur like an otter, but its feet and mouth are like those of a duck. It burrows in the banks of streams, especially where they are shaded by bushes, and is a splendid swimmer and diver. There is also a kind of hedge-hog, called an echidna, also with a bill like a duck's, but it lives on the land and eats ants.


ROSELLA PARROT.

15. There are various kinds of flesh-eating animals, some of which are marsupials; but the only ones which you are likely to have heard of are the 'Tasmanian Devil' and the Dingo. The 'Devil' is simply

a stupid, ugly black beast, which is only found in Tasmania. The Dingo is a kind of dog, and is rather a pretty and interesting animal about the size of a pointer-dog, but as it works great havoc amongst lambs, the sheep-farmers dislike it very much.



BOWER BIRDS.

16. As you have been told, most of the small birds of Australia do not sing, but that does not imply that they make no noise at all. On the contrary, some of them make a great deal of noise, most of it exceedingly unmusical. For instance, the commonest birds are cockatoos, crowds of which squawk from almost every thicket and copse of trees. And the giant king-fisher's note is so like a long and hearty laugh that the bird has been called the Laughing Jackass.

17. Australia has also a plentiful supply of

reptiles and other kinds of animal life. The sea-coast in the north swarms with turtles and sea-slugs; snakes abound in nearly all parts of the continent, most of them being poisonous; and there are swarms upon swarms of rabbits. All



YORK DEVIL.

these are, however, much less important than the sheep and cattle, the sheep numbering nearly *150,000,000.*

18 You will not be surprised, therefore, to hear that the chief product of Australia is wool. Upwards of 20 million pounds' worth is exported each year. Of this New South Wales produces nearly one-half, and Victoria more than one-fourth. The great sheep-runs are on the

western slopes of the eastern highlands; and in the plains of the Murray river system. Mutton, too, is exported in large quantities in a frozen state.



LAUGHING JACKASS.

19. Wheat is the next important product, and South Australia is the greatest wheat-growing colony. Other less important agricultural products are maize, oats, wine, and fruit.

20. Minerals abound in Australia, chief among them being gold, tin, silver, iron, and coal. The total yield of gold by Australia, since its discovery in 1867, is said to amount to the enormous value of 300 million pounds. Victoria has yielded the largest amount, though large quantities have been found in West Australia and Queensland. Tin is found in Queensland, coal and silver in New South Wales, and iron in West and South Australia.

21. The chief industries are sheep-farming, agriculture, and mining. Manufactures are mostly confined to products for home consumption. Sheep-farming employs the fewest number of persons, but yields by far the largest returns.

22. The commerce of Australia in proportion to its population is greater than that of any other country in the world. The total yearly value of its exports and imports amounts to over 100 millions. Great Britain takes about one-fourth of this trade. The chief imports are textile fabrics and clothing, and iron and steel goods. Splendid lines of steamers ply regularly between Australia and Great Britain, Europe, and America.

23. The total population of the continent, as we have already noted, amounts to above three millions, that is, considerably less than that of London. Victoria is the most densely populated of the Australian colonies. Considering the sparse population, Australia is admirably supplied with railway and telegraph lines. In fact, it is better supplied with railways than with roads.

PART II. THE COUNTRIES.

NEW SOUTH WALES.

1. New South Wales is the mother colony, and has an area of more than 300,000 square miles. Most of the people live on the low lands along the coast, but their business is mainly concerned with the millions of sheep which we find on the great plains of the interior.

2. Besides these sheep, there are over a million cattle in the colony, but they are mainly confined to the coast lands. Round Sydney, where the population is densest, the milk is made into butter and cheese.

3. Though most of the business is in wool, mutton, and other animal products, there is some agriculture. Wheat is grown on the tableland; large quantities of oranges and other fruit are grown near Sydney; and in the warmer north a considerable amount of land is tilled to grow maize, sugar, and bananas.

4. As we have already seen, the mineral wealth of the colony is mainly in coal and silver, though gold and tin are also produced. The richest coal district is near Newcastle, round which for

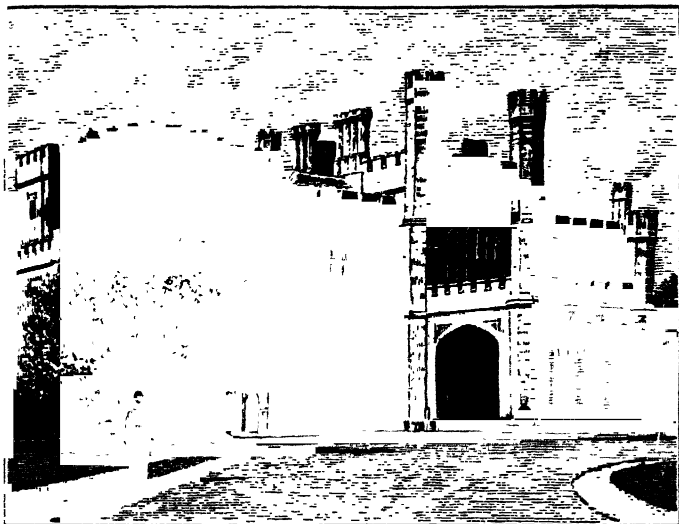


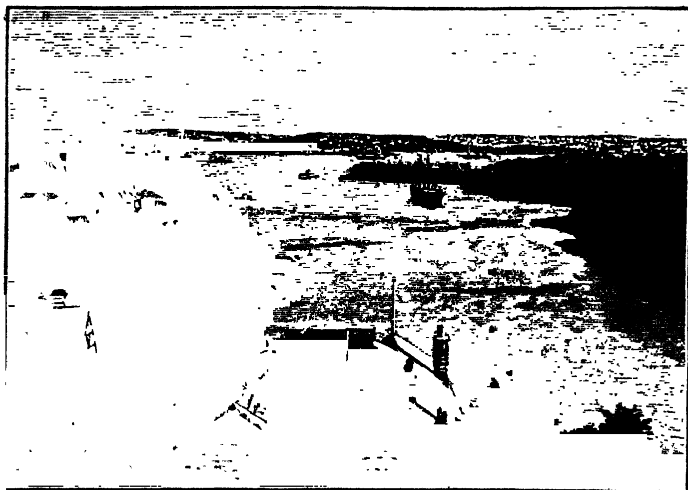
Photo N. P. Edwards

GOVERNMENT HOUSE, SYDNEY.

fifty miles the mass of the population is engaged in coal-mining. The silver mines are mainly in the far west, round Silverton and Broken Hill.

5. Sydney, the capital of the colony, as we have also seen, is one of the finest ports in the southern hemisphere. The city extends for ten

miles along the south side of Port-Jackson, and has some large suburbs on the west and north sides, Paramatta being the chief. Being an old city, its streets are not very broad or very straight, but they are exceedingly busy, and some of the



buildings are very fine—*e.g.* the Town Hall, Cathedral, and University.

6. Next in importance to the capital comes the great coal centre of Newcastle, where a fine harbour has been made by building a long breakwater from the shore to a rocky island some distance out in the water. The busy population

gets much of its food from the rich farms farther up the valley of the Hunter river, especially round Maitland, which is famous for its melons, grapes, and oranges.

7. Farther north than Newcastle, some distance up the valley of the Clarence river, stands Grafton, one of the few towns in the colony where there are mills. But you must not think that they are for cotton or woollen goods. They are sugar-mills, for the valley of the Clarence is a great sugar-growing district.

8. The other important towns of the colony lie mainly on or near the edge of the tableland, Goulburn, Bathurst, and Albury being the chief. Goulburn is the centre of a rich farming district, and has some busy tanneries; Bathurst, which is about the same size, is also a farming centre, and deals specially in wool and wheat. Albury, besides being an important junction between New South Wales and Victoria, stands in a district which produces magnificent grapes.

9. Farther inland there are several important but much smaller towns. The largest of them and the nearest to Albury is Wagga Wagga, a great sheep-farming centre, where a fine bridge crosses the Murrumbidgee. The length of the bridge—two miles—may show you how careful the people are to provide against floods, for the river is

generally less than 200 yards wide at this point. Deniliquin, Hay, and Bourke are somewhat similar places, but more exposed to drought.

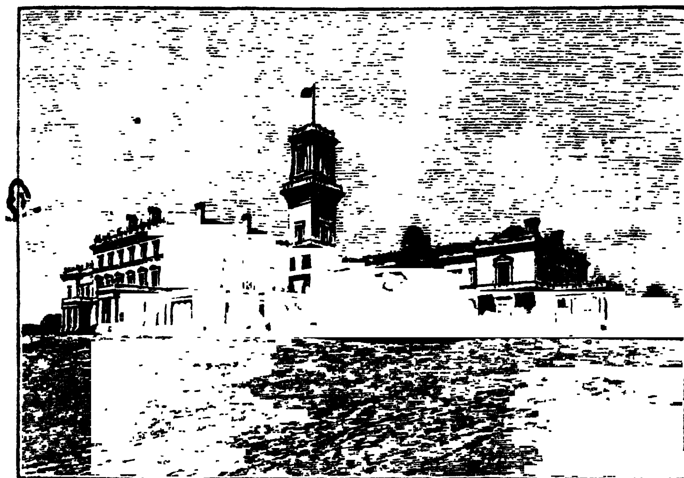
VICTORIA.

1. Victoria is the smallest of the Australian colonies, but for its size the most important. As it lies farther south than its sister colonies, and has the ocean practically on three sides, the climate is cooler and more even than theirs. This in itself would have attracted a large population, especially of farmers; but there was found to be also an extraordinary amount of mineral wealth.

2. As you have already been told, the colony at first formed part of New South Wales, and was called the Port Phillip District; but when it was made a separate colony in 1851 it was called after the great Queen Victoria. And its capital was called after Lord Melbourne, who was Prime Minister of the United Kingdom when Queen Victoria came to the throne in 1837.

3. Melbourne, with a population of over half a million, is the most important city, and perhaps the finest, in Australia. As it is a much younger city than Sydney, it was laid out on a much

wiser and wider plan. There are long avenues of handsome buildings, fine broad streets, large open spaces, and gardens round almost all the larger houses. The result is that the city extends over



GOVERNMENT HOUSE, MELBOURNE.

a very large area, being more than 14 miles in length and more than 10 miles in breadth.

4. Next to Melbourne in importance come the two gold-mining towns of Ballarat and Bendigo. Ballarat was the first of the gold-diggers' camps, and there is still a good deal of gold-mining round it; but the town is now the centre also of a busy farming district, and has very important

locomotive works. Bendigo is still almost entirely a gold-mining centre. Its name used to be Sandhurst, but the people voted for it to be changed to Bendigo in 1891. The other chief gold centres in the colony are Castlemain, Clunes, and Stawell;

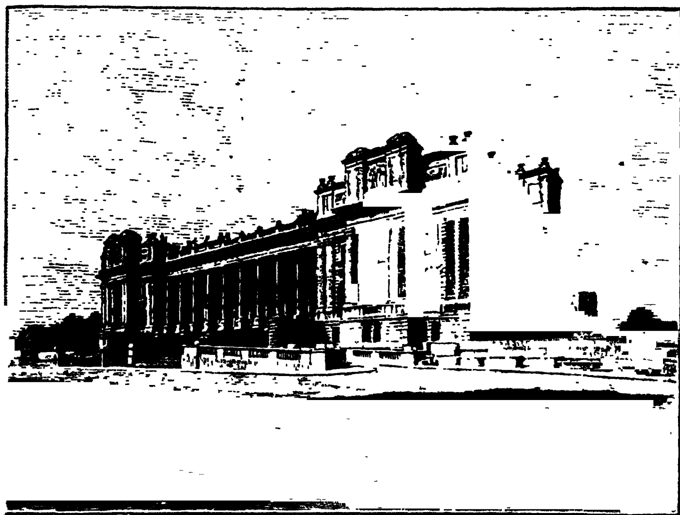


Photo N P Edwards.

HOUSE OF PARLIAMENT, MELBOURNE.

Castlemain, which used to be called Mount Alexander Diggings, is also famous for its breweries.

5. There are several little ports which are rapidly increasing in importance, for instance, Portland, Warrnambool, and Geelong, the last being

much the most important, for it has some busy woollen mills. And there are a few rising towns inland, such as the farming centres of Sale and Hamilton, and the river-side towns of Echuca and

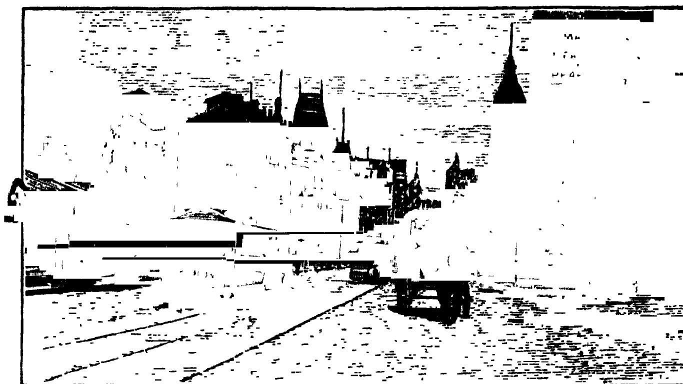


Photo N. P. Edwards

COLLINS STREET (LOOKING WEST), MELBOURNE.

Mildura. Echuca is specially important because it commands a fine bridge across the Murray, in a rich wheat and vine district.

SOUTH AUSTRALIA.

1. South Australia was so called because at first it was only a district along the south of the continent, but now it includes the whole middle 'slice' of the continent; it is the only colony which touches all the other colonies.

2. The size of the colony is now immense, for it is larger than any European country except Russia, and forms almost one-third of all Australia. It includes, however, the great salt-lake district of the continent, and enormous tracts of useless scrub and barren desert.

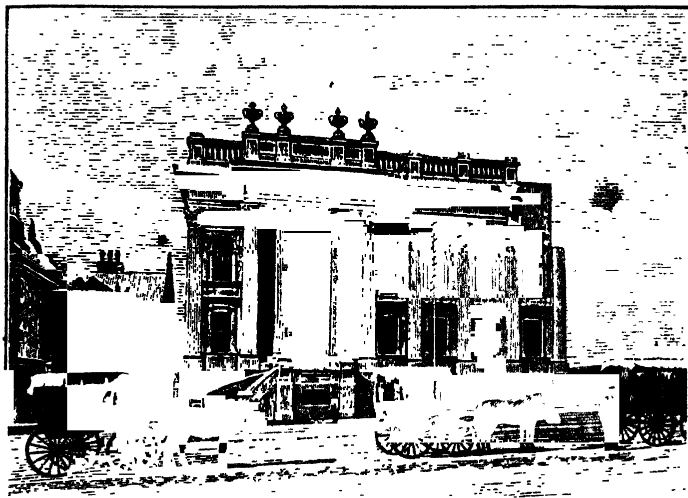


Photo N P Edwards.

PARLIAMENT HOUSE, ADELAIDE.

3. Over such a large area, of course, there must be a considerable variety of climate, but almost everywhere the winters are very mild and the summers are dry and very hot. The most disagreeable feature of the climate is the frequency of the scorching sand-winds which blow from the desert in summer,

4. You will understand, therefore, how very difficult it is to get a proper supply of water. The people build huge dams and dig enormous 'tanks' to catch any rain which does fall, and have in this way been able to use parts of the country which was originally called the "Never Never Land"; but even now the difficulties and risks of sheep-farming are enough to frighten away all except the boldest and most skilful farmers.

5. This does not apply to the south-eastern corner of the colony. There the rainfall is certain and sufficient even for agriculture; indeed the colony produces the best wheat and some of the best wine in Australia. Wheat and wine, with wool, form the chief exports of the colony.

6. Originally, however, the colony, like the other colonies, owed much of its prosperity to mineral wealth, not in gold or silver or tin or coal, but copper. The chief copper mines have been along or near the coast, at such places as Wallaroo and Moonta; but rich deposits have also been found farther inland, *e.g.* at Kooringa and Kapunda.

7. In the south-east there are also a few small farming centres, such as Gawler, which is famous for wine, and Mount Gambia, which is famous

for wheat. But the only really large town in the whole colony is the capital, Adelaide, and even this town is not very important. Indeed it is quite possible that some day the most important

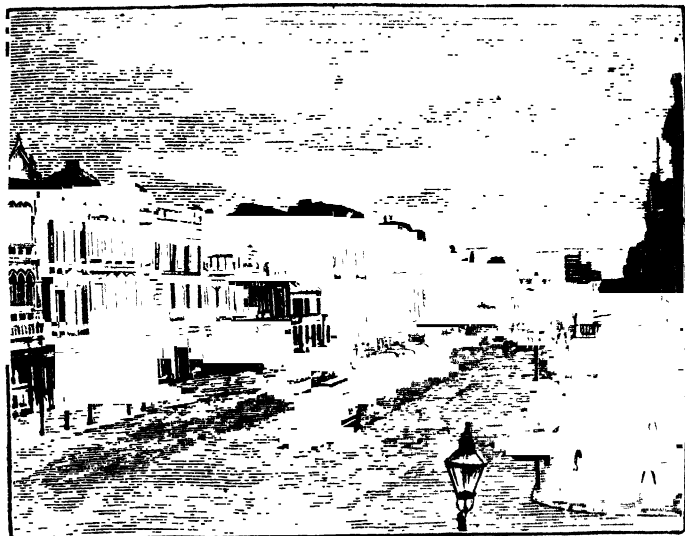


Photo. N P Edwards

KING WILLIAM STREET, ADELAIDE.

place in South Australia will be the little harbour of Palmerston, in the Northern Territory, which is the terminus of the cross-country telegraph line and the ocean cable. But its climate is bad, and there are a good many Blacks in the neighbourhood.

QUEENSLAND.

1. Queensland is the youngest of the Australian colonies, and one of the largest. You can see from your map how near its most northerly point, Cape York, is to the equator; and you know from that how hot the climate must be except in the south. As the colony also gets a good deal of rain, it is not as healthy as the other colonies.

2. The great heat and this extra rainfall enable the inhabitants of the low coast lands to grow large quantities of what are called 'tropical' products, such as sugar and rice, especially round Mackay and Bundaberg. On the edge of the tableland the climate is still too damp and hot to suit sheep, but there are splendid cattle pastures. In the interior it is dry enough for sheep except towards the extreme north, and the Darling Downs form one of the finest sheep-runs in the world, though they suffer from drought like the neighbouring downs in New South Wales. In some places, too, *e.g.* Toowoomba, there are prosperous fruit-farms.

3. Except on the sheep-farms the climate is generally too unhealthy for Europeans to do much hard work in, and this fact has led to the

introduction of many 'coloured labourers, Chinese and others, to do the hard work, especially on the sugar plantations. But the Australians have now become anxious about introducing so much cheap 'foreign' labour, and have put checks on the immigration of coloured labourers.

4. The capital, Brisbane, is a busy city within easy reach of the coal-mines of Ipswich, and it has a very famous Botanic Garden, but it is not nearly so important as the other capitals which. you have read of. One reason for this is that Queensland has such an immense coast-line that Brisbane cannot possibly serve all of it, as Melbourne can serve all Victoria, and Sydney can serve most of New South Wales. And consequently a good deal of trade goes through other ports, especially Rockhampton, Maryborough, Townsville, and Cooktown.

5. Rockhampton owes most of its importance to the fact that it is the most convenient port for the famous Mount Morgan gold-mines. This hill was sold a few years ago for about £300, for it was thought to be just a mass of barren rock; but it has been found to be a mass of gold-bearing quartz, and is now valued at £8,000,000.

6. Maryborough also owes much of its importance to its nearness to the gold and coal

mines of Gympie, but it is also a busy sugar centre. And inland there are some valuable forests of cedar, the 'logs' of which are exported through Maryborough. In olden days, too, there used to be a certain amount of ship-



MINERS' CAMP.

building, but wooden ships have now been largely superseded by iron ones.

7. Townsville, again, repeats the story of Rockhampton and Maryborough, for it owes much of its importance to its nearness to gold-mines, especially the famous mines at Charters Towers. Indeed, the climate is so hot and unhealthy that probably the place would never have become a busy port except for the gold traffic.

the winters are not quite as cold as in England, nor the summers quite so hot.

3. The main industry of the island is farming, especially sheep-farming, but mining and fruit-growing are also important. The fruit is

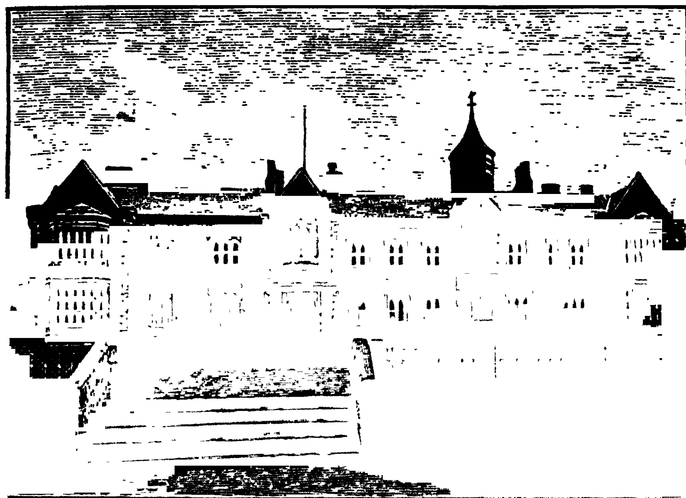


Photo. N. P. Edwards.

GOVERNMENT HOUSE, TASMANIA.

generally made into jam, of which *several thousand tons* are exported every year. Gold and coal are mined, and the coal is very useful, but the chief mineral of the country is tin, especially in the mountains of the north-west.

4. The capital, Hobart, has a fine harbour on the estuary of the Derwent, and is nicely

sheltered at the foot of a fine hill called Mount Wellington, which is nearly as high as Ben Nevis. The climate is so good, and the scenery is so pretty, that the town is a favourite place



Photo. N. P. Edwards.

HOBART FROM THE BAY.

for visitors from Australia to pass their *Christmas* holidays, when the heat in the continent is greatest.

5. Launceston, at the mouth of the Tamar or Esk river, is an even busier port because it is nearer to Melbourne. A great many prize sheep are shipped from here to Australia, some of them being worth *£1000* apiece!

PART III.

GEOGRAPHY OF NEW ZEALAND.

General Description.

1. About 1000 miles to the east of Australia lie the New Zealand islands, which, like the British Isles, consist of two large islands and many small ones. Another little island near them is called Antipodes Island because it is the antipodes of England—that is, exactly on the opposite side of the earth to England.

2. If you turn the map upside down, it may strike you that the two islands together somewhat resemble a leg and foot, but broken into two parts by a broad strait called Cook's Strait. And you should compare them with Italy.

3. Further, the map will show you that the islands are long and narrow, and that their coast lines in one part of each island are not very much broken. The exceptions are the north-east coast of North Island, where there are many

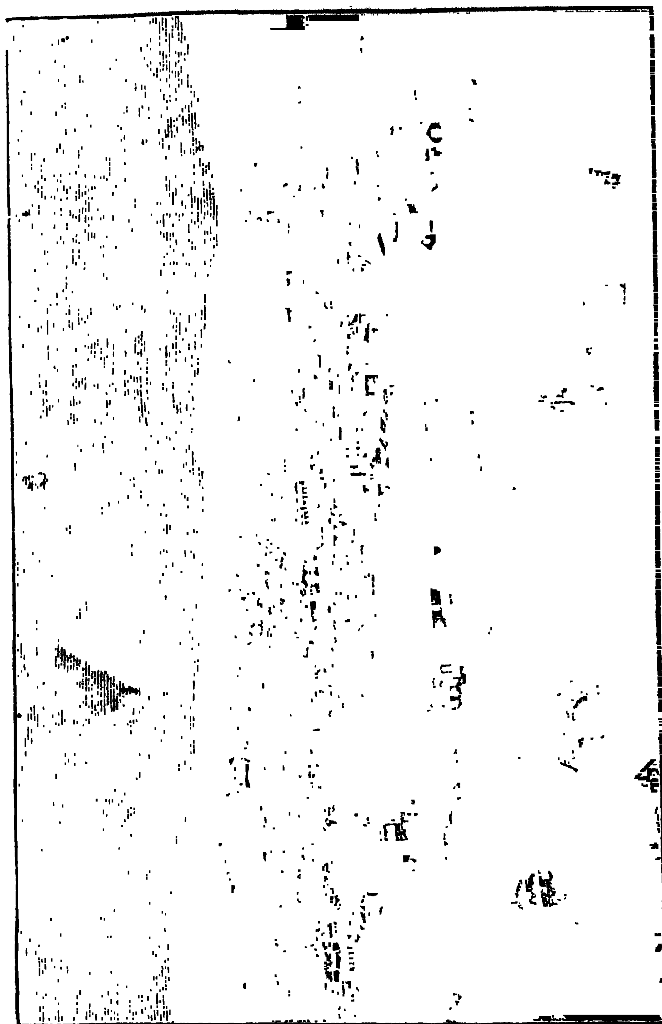


Photo. Valentine & Sons, Ltd., Dundee

WELLINGTON.

bays, the largest being the Bay of Plenty and the Gulf of Hauraki; and the south-west coast of South Island, which is cut into lochs or fiords called sounds, like the north-west coast of Scotland.

4. There are also many good harbours, the positions of which you can find on the map—notably those of Auckland and Wellington in North Island; and Lyttelton and Dunedin in South Island.

5. Next look at the surface. You will see that both islands are mountainous; but that the South Island is the more mountainous of the two. You will see, too, that the mountain chains of the South Island lie near the west coast, while those of the North Island lie nearer the east coast.

6. To the east of the great range of mountains in the South Island there lies a long low plain known as the Canterbury Plain or Plains. And it is from this plain that the excellent 'Canterbury' lamb and mutton comes to England.

7. Your map will also show you that New Zealand has many rivers and lakes. The rivers naturally flow, for the most part, east or west, and are not very long; but they are very deep and very rapid. Most of the lakes are in the

mountain valleys of the South Island, but you can see that there is one very large lake in the North Island.

Surface.

1. New Zealand has been called the Britain of the South, because the islands very much resemble Great Britain in their scenery and climate. "Many parts of New Zealand remind one of the romantic scenery of Scotland. If a long-sleeping Briton could be set down among the Otago Hills, and told he was travelling in the west of Scotland, he might be easily deceived, though he knew Scotland well."

2. But there are some features of New Zealand entirely wanting in the British Islands. There is, for instance, a chain of mountains, with peaks clothed in eternal snow, three times the height of any at home; and with glaciers vaster than those of Switzerland. Then there is a volcanic hot lake district in the centre of the North Island, of which we may say: "There is nothing like it anywhere else in the world." And, lastly, there are the ferns. "New Zealand is a land of ferns. Here are tree ferns 30 or 40 feet high, beautiful filmy-ferns growing on trunks of trees; while rocks and shady banks, and often the whole surface of the ground for miles, are covered with ferns in great variety. In the North Island the

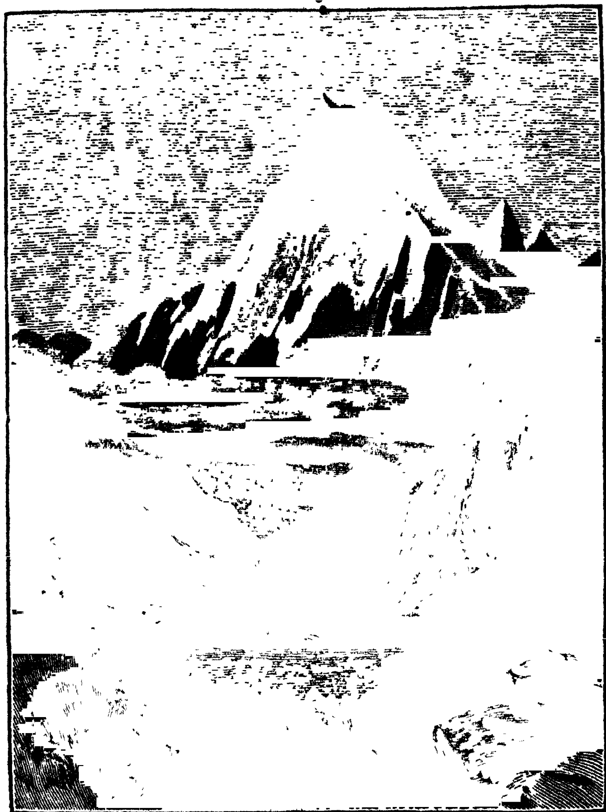
fern has to be burnt off before the land is fit for cultivation."

3. The great mountain chain is the Southern Alps, running parallel to the west coast in South Island. The highest summit, Mount Cook, called after the great sailor, is named by the natives "the Cloud Piercer." It is the highest mountain in New Zealand, but is not a volcano. The highest peaks in North Island, however—Mount Ruapehu, Mount Egmont, and Mount Tongariro—are volcanoes.

4. In the district referred to, volcanic forces below the surface are constantly at work. This is shown by smoking craters, boiling springs, hot-water lakes, seething mud pools, and smoking geysers. In some parts the ground is unsafe to walk upon, for you may chance to place your foot in a tiny scalding bubbling geyser.

5. The largest lake is Lake Taupo, "a veritable inland sea, six times the size of Loch Lomond, with dark blue waters of unknown depths." The River Waikato, the largest river in New Zealand, carries the surplus waters of the lake into the sea, and about 25 miles from its outlet it passes through a striking group of hot springs along its banks, while clouds of steam ascend from hot cascades falling into the river, and from basins of scalding water.

6. Perhaps the most wonderful part of the lake region was the boiling springs, and flinty basins



MOUNT COOK, NEW ZEALAND.

and terraces. These were destroyed a few years ago by the eruption of a neighbouring volcano,

but they are being built up again by the lime in the water.

7. The numerous 'Alpine' lakes amongst the mountains and valleys of the Southern Alps are fed like the rivers of South Island by melting glaciers. These rivers are so short and rapid that even the best of them are navigable for only a few miles from their mouths. They are liable to floods from the melting of the snows.

8. The smaller island lying to the south of South Island, called Stewart Island, has an irregular coast line, with some good harbours. Its forests yield valuable timber, and the surrounding seas abound with fish.

Climate, Productions, Industries, Commerce.

1. New Zealand stretches through about thirteen degrees of latitude, and as we should expect, therefore, the climate varies considerably. On the whole, we may say it is bracing, mild, and even. Except on the mountains, ice and snow are almost unknown in the North Island. The climate of South Island may be compared with that of the south of England, but the rainfall is greater everywhere, though the atmosphere is drier than it is in Great Britain.

2. The most striking peculiarity in the climate

of New Zealand is the constant winds. Dunedin, the least windy place on the coast, has only about



Photo ... P. Edwards.

NATIVE CLIMBING

100 calm days in the year; while the towns on the straits between the islands seldom get a calm day at all. The regular winds come from the

north-west, and, being laden with moisture, make the west coast more rainy than the east.

3. Grains and fruits grow profusely; but they have all been introduced by the settlers. No native grain or native fruit exists in New Zealand. The most valuable native production is the timber (and gum) from the Kauri pine. This pine is a magnificent tree which grows to a height of from 150 to 200 feet, and furnishes excellent timber. Whole towns have been built of it, and it is largely exported. Another noted production is native flax, of which ropes of great strength are made.

4. Sheep-farming and agriculture are the chief occupations. The colony owns about 10 million sheep. The chief minerals are gold and coal. Gold is found in all parts, but the amount collected seems to be decreasing every year. Some of the coal-fields are very extensive.

5. The chief exports are wool (nearly all of which goes to London), gold, grain and flour, coal and frozen meat. The chief imports are clothing, steel, iron goods, and sugar.

6. The goods manufactured in New Zealand, such as woollen goods, hosiery, blankets, soap, paper, leather, etc., are all for home consumption. For its population, New Zealand is well supplied with railways and telegraphs.

History.

1. New Zealand was discovered by Tasman, a Dutch navigator, in 1642, but Captain Cook was the first traveller who explored its coasts, more than 100 years after, and made the islands known to the world. The country was already inhabited by a fine race of brown savages.

2. "The Maoris, as the natives call themselves, were from the first brave, generous, and warlike. About as tall as Englishmen, they have strong, muscular frames, with legs that are short for their stature. The head is well shaped and, though the lips are generally thick, the features are not unpleasing, and are often handsome. Their skin is usually an olive-brown, and most of them have long, black, slightly waved hair. Tattooing was practised by both sexes, but it is now almost abandoned. At the time of Cook's visit, and down to the formation of the colony, the tribes lived in a constant state of warfare. They fought with clubs and spears of heavy wood and stone, and they ate the bodies of their victims, believing that this vile practice imparted courage and strength to those who partook of the feast.

3. "The earliest European settlers found the Maoris in a state of civilization not often to be

met with among a barbarous and savage people. They lived together in villages, in huts well constructed of wood and reeds, and protected by ditches and palisades. They prepared flax from



A MAORI.

a native plant, and wove it into mats and clothing, which they dyed with various kinds of bark and roots, and ornamented with the bright feathers of birds. They also made cloaks of great value from the dressed skins of their dogs.

4. "Although they had no written language, they had numerous songs and proverbs, legends and traditions, which were handed down from



Photo N P Edwards.

MAORI WOMEN

generation to generation. They knew the plants, the birds, the insects, and the rocks of their own country, and they gave them all distinctive names. They had words in their language for

the seasons, for all the chief stars, and for measures of length.

5. "They had, too, numerous games of skill similar to our own, such as kite-flying, skipping, wrestling, stilt-walking, and others. They had their temples and priests, omens and sacrifices; and they held a firm belief in a future state. They were great orators, and at least one son of every chief had to learn the traditions, laws, and rites of his tribe, and to be an orator and poet, as well as a warrior, a hunter, and a seaman."

6. Missionaries have been at work among the Maories since almost the beginning of the present century. Their labours have been crowned with remarkable success, not only in converting the people, but in encouraging peaceful habits and a more civilized mode of life.

7. The first White settlers in New Zealand were probably deserters from the whale ships that called at the islands, and escaped convicts from New South Wales. The first regular colony was planted in 1840, in North Island.

8. Disputes about land caused a war between the Maories and the colonists, which began in 1843, and did not end till 1869. Meantime the colony increased at a rapid rate, and in 1852 self-government was granted.

9. The Government is modelled on that of our own. The Governor represents the King, by whom he is appointed; the Legislative Council represents our House of Lords, except that the members are *elected* for life; and the Lower Chamber, the members of which are elected for three years, represents our House of Commons.

Provinces and Towns.

1. Before 1875 New Zealand was divided into provinces. In that year the provinces were abolished, and smaller divisions or counties were substituted. The country is, however, still best known under the old names of its provinces.

2. Auckland is the chief of the four provinces of North Island. Here the first settlements were made, and here the most powerful of the native tribes lived. The city of Auckland is a busy port, built on a excellent harbour in the Gulf of Hauraki. It was once the capital of New Zealand, and still is the largest city in the colony. It exports the timber and gum of the Kauri pine, which grows only in this province.

3. The seat of government is now at Wellington, a city built on the extreme south of North Island. It is central, and easy of access from both islands. Most of the houses here are built

of wood, because wooden houses withstand the shocks of earthquakes better than those constructed of stone, and the neighbourhood is subject to occasional earthquakes. The city has an excellent harbour, capable of receiving the largest ships; but it is terribly windy.

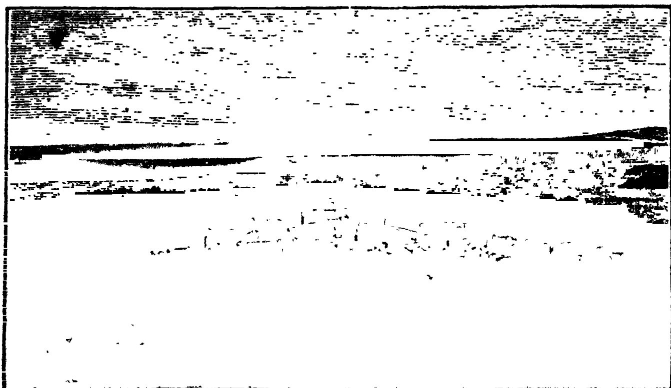


Photo Valentine & Sons, Ltd., Dundee

AUCKLAND.

4. The province of Canterbury occupies the central portion of South Island, stretching from the sea westward to the Alps. About one-third of the province consists of low tablelands and plains. These are the Canterbury Plains, celebrated as grazing grounds for sheep and cattle, especially sheep.

5. The capital of the province is Christchurch, the "City of the Plains." It is built on the

River Avon, a few miles inland. Lyttleton is its port.

6. Dunedin, the capital of the old province of Otago, is the first commercial city in New Zealand. Otago may be called the Scotch province, just as Canterbury is the English province. It is the chief gold-producing province, and the most prosperous district in the island. Dunedin possesses in Port Chalmers a fine harbour, which is the outlet for the productions of the south.

7. Nelson, on Tasman Bay, is the port for the north of the island. It is very pleasantly situated among hop and fruit gardens, the peaches being specially fine.

8. The total population of New Zealand is about equal to that of Glasgow, and more than one-fourth of this population is to be found in its four principal cities—Auckland, Dunedin, Christchurch, and Wellington. The Maories, who in Cook's time are said to have numbered about 100,000, now count up to about 40,000. They live almost entirely in North Island.

PART IV.

PRODUCTIONS AND TOWNS OF AUSTRALIA AND NEW ZEALAND.

Plants.

1. As we have seen now many times, the plants of a country depend partly on its soil and partly on its climate. Some thrive best on the loose dry kind of soil which we find on the edge of a sandy desert; others like the damp clay soils which are often found near the sea.

2. As we have also seen, the particular food-plants which thrive best in a particular country, generally come to be the special food of the people of that country. And, of course, if food-plants are very few and very scarce, the people will have to learn to do without them, and eat fish or flesh instead.

3. Now, the chief FOOD-PLANTS are grains, pulses, and fruits, the grains being specially

important; and, though now Australasia produces in abundance the three most useful grains in the world—wheat, maize, and rice—there was originally no grain in Australia out of which the natives could make bread.

4. As you know, rice and maize require both more heat and more moisture than wheat; and, therefore, you will expect them to be grown in the north and north-east. Maize grows well even as far south as the middle of the New South Wales coast, but the rice is confined to Queensland and the Northern Territory.

5. The wheat grows along the edge of the plateau, even inside the Tropics, but Victoria and South Australia are the best colonies for it. Good crops are also raised on the dry side of the North Island of New Zealand; but the South Island, like Tasmania, produces more oats than wheat.

6. Sugar-cane and bananas are also important, but, of course, they are confined largely to the same districts as the rice. There are, however, two great distinctions between the two plants. One is that the sugar requires a large area of land, while the banana plantations are comparatively small. The other is that on the sugar plantations there is very heavy work to be done which, in such a hot climate, can be done only

by coloured labourers; while nearly all the work on the banana plantations is light, and can be done by Europeans.

7. Australia is specially a land of fruit. Besides the bananas, there are all kinds of European fruits, especially oranges, grapes, and apples. In Queensland, too, there are large quantities of pineapples. The best oranges come from the mild, warm slopes behind the great harbour of Sydney, especially from round Paramatta; the best grapes come from the warm dry slopes on the landward edge of the plateau; and the best apples come from Victoria and Tasmania.

8. Besides these actual food-plants, there are several 'DRINK AND DRUG' PLANTS which have almost come to be used as food. Of these the chief are tobacco and hops. As the tobacco requires considerable heat and moisture, it is mainly confined to the coast lands of New South Wales and the south of Queensland. The hops grow best in Tasmania and New Zealand.

9. But the most valuable of all the 'Drug' plants in Australasia is the Eucalyptus, for the oil of the 'Blue Gum' or 'Fever Tree' species has exceedingly useful medical qualities. It is found in abundance in all the Australian colonies except Tasmania, where the climate is not sufficiently desert-like for it to flourish well.

10. In New Zealand there is a Kauri, or Yellow Pine, which yields also a useful gum; but it is not medicinal, being used only in making fine varnish and for similar purposes. The timber of the Kauri is very good, being both light and strong.

11. New Zealand is also famous for a native TEXTILE PLANT, called Phormium or New Zealand Flax. It is not really a flax, but a kind of hemp, and is more useful for rough cordage than for anything else. But it grows wild along the valley of the Waikato river, and it might be much improved in quality by careful cultivation.

12. Real flax is grown to a small extent in Victoria, where it was imported; but the chief textile plant of Australia is cotton, which is, of course, also an imported plant. A little cotton is grown in New South Wales; but Queensland suits the plant much better, and it might be grown widely in the latter colony along the edge of coral reefs.

Animals.

1. As more than half Australia is inhospitable desert, you know that it can produce neither plant nor animal products of any value; and, as we have already seen that round the edge of a desert pasture is more profitable than

agriculture, you may infer that the animal products of Australia are more valuable than the vegetable products.

2. As there was originally no grass out of which the natives could make bread, so there was no animal from which they could get milk; and these two facts may help to account for the degraded character of the natives.

3. The great commercial animals of the world have, however, been introduced into the country with complete success; the most valuable are certainly the merino sheep, but cattle and horses are also very important. Rabbits, originally imported by some of the colonists, have multiplied so fast that they have become a real and formidable plague.

4. The sheep is the special animal of Australasia, and thrives as well in the mild island climates of New Zealand and Tasmania as in the continental extremes of Australia itself. New South Wales has the most sheep, and exports the most wool; but Victoria, with less dust and more rain, grows a finer quality of wool. Tasmania specialises in prize animals, the flocks being very small but of superb quality; and New Zealand aims at producing both wool and mutton.

5. New Zealand deserves special attention in this respect for it has special advantages, and its

sturdy colonists have used their advantages to the utmost. The first of them is the mild, moist climate, which keeps the grass growing all the year round. A second is that a great deal of the pasture is on a rich but porous soil, which



AN AUSTRALIAN SHEEP-RUN.

is very healthy for the animals to feed over. A third is that the height of the Southern Alps guarantees an absolutely certain supply of water always.

6. The colonists have also made a regular science of their business, so as to get the utmost

possible profit and the least possible waste; and, in using what is often wasted, they also get rid of much unwholesome and insanitary matter. Thus, within a few hours of the animals being



Photo N P Edwards

AUSTRALASIAN RANCH. AN OVERLANDING MOB.

killed, all the various products are distributed to the tallow-works, tanneries, sausage-factories, manure-pits, etc.

7. The cattle are most useful in Queensland and Victoria. In the former they are kept for meat, in the latter for milk; and the milk traffic is organised to perfection round a number of co-operative butter-factories, to which the

Government has been giving a bonus on every pound of butter exported to London and Glasgow.

Minerals.

1. The continent is, of course, most famous for its gold, and the amount of gold still in it is probably enormous; but in some ways the coal of New South Wales and New Zealand is more important even than the gold, and the most widely-spread mineral is undoubtedly salt.

2. It is very characteristic that the chief coal mines both in New Zealand and in New South Wales are on the coast, so that it is very easy to export the coal. In both countries there are towns called Newcastle, and in both the coal is of good quality. But the coal of Greymouth, N.Z., is of such specially good quality that it is eagerly sought after by the captains of men-of-war whose supplies of Welsh coal have run short.

3. Gold is the typical mineral of West Australia and Victoria, but is also valuable in Queensland and the North Island of New Zealand. Unfortunately, the richest mines now are in places where it is difficult to get water and timber, both of which are very important in gold-mining.

4. Silver is the typical metal of New South Wales, and is not found in any great quantity in any of the other colonies. But the silver mines

are so far from the New South Wales coast, and so near that of South Australia, that the metal is exported through the latter colony.

5. Tin is the typical metal of Tasmania, and is found in abundance in Queensland. Indeed, it is found all along the eastern edge of the table-land, and the deposits are continued across the East Indies up to the Malay Peninsula.

6. Copper is the typical metal of South Australia, but the supplies are running short; and, though there are deposits of copper in both Queensland and New South Wales, they are not very rich and not in very accessible places.

7. There is iron in all the colonies, and in some places it is very abundant. Indeed, it is so abundant that many people dislike Australian wines simply because they taste so strongly of iron. But the metal is not found near enough to coal and lime and to water transport to make it worth while working it in the meantime.

Towns.

1. If you remember what we said about the growth of cities in Africa, you will probably guess that the cities of Australia are not much like those to which you may be accustomed in the British Isles.

2. In the first place, Australia is a young country, and has as yet very few manufacturers and no really old cities. In the second place, it is so largely desert that pastoral products and precious metals are enormously more important than any other of its products.

3. Under these circumstances we cannot expect to find cities growing up anywhere in Australia for the reasons which made most old cities spring up in particular places. For instance, there is no large town on the whole continent which owes its position to the ease with which it can be defended, or the abundance of food near it.

4. The cities are, therefore, simply of two great types—commercial centres and mineral centres. The former are all on the coast-lands, and practically all of them have good natural harbours, as at Sydney and Melbourne, or have been provided with good artificial harbours, as at Brisbane and Fremantle.

5. The mineral centres have sprung up mainly in connection with deposits of gold, as Coolgardie and Kalgurli, and are generally of the kind called "Mushroom Cities," which implies that they have sprung up very quickly, and may die down with equal speed if the deposits of metal become exhausted.

6. The probable exceptions to this may be found in towns like Newcastle and Greymouth, which have sprung up in connection with deposits of coal; and, as we have seen, the deposits of coal are found mainly near the sea. The result is that most of the coal towns are now good artificial harbours.

7. Lastly, there remain 'railway' towns, such as Albury and Echuca, which are important junctions, though quite small. As the railway system is extended, and the various separate railways come to be united, these junctions will increase in size and importance. And probably the most important, when the trans-continental railway is completed, will be the town of Palmerston, which has also in Port Darwin one of the finest harbours in Australasia.

SUMMARY.

A.—AFRICA.

1. Size, Shape, etc.

Africa is the second of the six continents, both in size and in average height.

(1) It contains nearly 12,000,000 square miles of land, = nearly a quarter of all the land in the world.

(2) From Cape Agulhas to Cape Blanco is about 5000 miles, and from Cape Verd to Cape Guardafui is nearly 5000 miles.

(3) In proportion, however, it has remarkably little coast, and very few good harbours.

(4) It has also very few islands, though some of the 'African' islands are very important—for instance Madagascar, Mauritius, Ascension, St. Helena, and the Madeira, Canary, and Cape Verd islands.

(5) The great average height is due to the continent being a more or less continuous tableland, with a rim of flat coastland.

(6) The four points where the coast of Africa comes very near to the coasts of neighbouring continents are, of course, very important, the Straits of Gibraltar, Cape Bon, the Isthmus of Suez, and the Bab-el-Mandeb Straits.

2. Mountains and Tablelands.

1. Like Asia, Africa is a continent of huge tablelands.

(1) Most of the so-called mountains are really the edges of these tablelands, which from the ocean do look like mountains.

(2) Almost the whole of the southern half of the continent forms one more or less continuous tableland of very considerable average height.

(3) Almost the whole of the northern half also forms one more or less continuous tableland, but the average height is less than in the south.

(4) In almost all parts of the continent, too, there are small areas which form by themselves very perfect little tablelands—for instance, the Great Karoo in Cape Colony, and Abyssinia.

(5) The tablelands are higher in the east than in the west, so that the backbone of the continent is said to be the high ridge which includes the Drackenberg, Mount Kilimanjaro, Mount Kenia, and the Abyssinian peaks.

2. The only real mountain-range, then, in Africa is the Atlas, which is quite different in age and formation from all the other mountains.

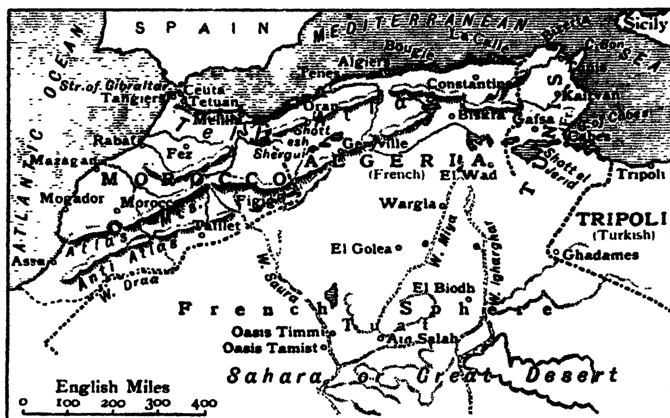
(1) The Atlas may be divided into two regions—the western or Moroccco mountains being higher than the eastern or Algerian and Tunisian mountains.

(2) There are several ranges included in the term Atlas, and all of them run more or less from east to west, like the other mountains of the Old World.

(3) The most important are the Great Atlas and the Little or Anti-Atlas, between which there are the two Wadis, or water-courses, of the Sus and the Draa.

(4) The slopes towards the Atlantic and the Mediterannean receive plenty of rain, brought to them by the west winds which blow in winter; but the slopes towards the Sahara are naturally very dry.

(5) The most important part of the whole area is the rich Tell country in Algeria, which—as you may be sure—is on the northern slope.



NORTH-WEST AFRICA.

3. The Sahara.

The Sahara, or Great Desert of Northern Africa, is the largest desert in the world.

(1) In size it is nearly equal to Canada.

(2) In shape, as we have seen, it is a low tableland.

(3) It is highest in the centre, where there are real ranges of hills which rise to a height of 6000 to 7000 feet—*i.e.* twice as high as Helvellyn or Snowdon.

(4) Owing to its size and shape, the Sahara is the hottest region in the world, as far as we know at present; but the interior of Australia may prove to be at least equally hot.

N.B.—Notice that these two areas run along the two tropics, where calms are constant, and to which, therefore, rain is seldom brought.

(5) The extreme dryness of the air in the interior, where the influence of the ocean cannot reach, causes tremendous extremes of heat and cold; and these great changes of temperature cause the rock to split up into sand.

(6) When this sand is lying about dry and loose, any stray gusts of wind sweep it up into low hills or 'dunes,' some of which are 500 feet high.

(7) The spots in this huge expanse of desert where water can be reached, are very fertile; they are called 'oases,' and grow magnificent dates.

4. The Sudan.

The Sudan is the land of the Negroes, and is generally divided into three parts.

(1) The western Sudan is an unhealthy, well watered district, which includes such rivers as the Senegal, the Gambia, and part of the Niger.

(2) The central Sudan is really the basin of Lake Chad, which expands and contracts with the seasons, being at least three times as large in the wet season as in the dry.

(3) The eastern Sudan is joined to the Sahara by a range of hills, from which many small rivers flow to feed the mighty Nile.

5. Eastern Highlands.

The Eastern Highlands contain the highest peaks of Africa and the Great Lakes.

(1) The chief lakes are the Victoria Nyanza, or Victoria 'Water,' which is nearly as large as Lake Superior, Lake Tanganyika, and Lake Nyasa.

(2) The chief peaks are those of the two extinct volcanoes of Kilimanjaro and Kenia.

(3) The chief importance of both the lakes and the highlands is that they feed the Nile, though the most important tributaries of the Nile—the Blue Nile and the Atbara—both come from the Abyssinian mountains.

6. The Nile.

1. The Nile is the longest river in the world, but by no means the largest.

(1) The length is partly due to the shape of Africa and partly to the fact that the river has to make a huge S-shaped bend in going round the Libyan Desert.

(2) The comparatively small amount of water in the Nile is due to the fact that it loses an immense amount by evaporation while passing through the dry hot air of the desert.

(3) The Delta *looks* as if it was pierced by several mouths; but, as a matter of fact, only two—the Rosetta in the west and the Damietta in the east—reach the sea.

2. The Nile is one of the most useful rivers in the world.

(1) Its chief value now lies in the fact that the whole fertility of Egypt depends on its rich mud and its supplies of water for irrigation.

BASIN OF THE NILE.

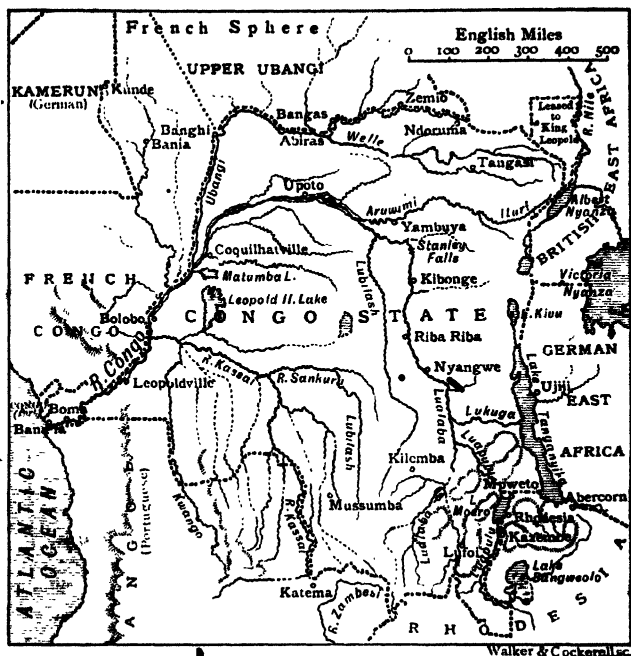
English Miles

0 100 200 300 400 500

MEDITERRANEAN SEA
Alexandria
Rosetta
Damietta
Port Said
Suez Canal
Suez
TRIPOLI (Turkish)
Cairo
Medinet el Fayum
Assiout
Libyan Desert
ARABIA
RED SEA
1st. Cataract
Assouan
R. Nile
2nd. Cataract
Wady Halfa
Nubian Desert
3rd. Cataract
Kerma
New Dongola
4th Cat.
Old Dongola
Abu Hamed
5th. Cataract
Suakin
Berber
6th. Cataract
Shendi
Omdurman
Khartoum
Atbara
ERITREA
Egyptian Sudan
Kordofan
El Fasher
El Obeid
Bahr el Azrek
Gondar
Tsana
Blue Nile
Darfur
French Sphere
White Nile
Bahr el Arab
R. Sobat
Sobat
ABYSSINIA
Addis Abeba
Bahr el Ghazal
R. Nile
UPPER UBANGI
Bor
Leased to King Leopold
R. Congo
BRITISH EAST AFRICA
Albert Nyanza
L. Choga
CONGO STATE
Mt. Elgon
Mt. Kenia
Mt. Ruwenzori
Uganda
Albert Edward Nyanza
Victoria Nyanza
GERMAN EAST AFRICA
Mt. Kilimanjaro

Walker & Cockerell sc.

(2) In former days it was perhaps at least equally valuable as a highway of transport between the Mediterranean and the interior of Africa.



BASIN OF THE CONGO.

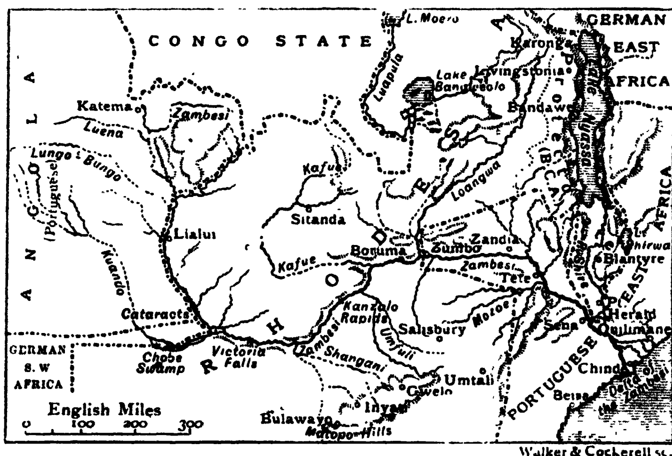
7. The Congo.

1. The Congo is the largest river in the world except the Amazon—that is, it carries more water to the sea than any other.

(1) The reason for this is partly the size of its basin and partly the fact that the basin lies in an area of constant rainfall on both sides of the Equator.

(2) It is less useful than the Nile for transport from the ocean because its lower course is blocked by miles of rapids which cannot be avoided or removed.

(3) Above the rapids, however, there are at least 6000 miles of navigable water apart from the various 'lakes,' of which Lake Leopold II. is the largest, and Stanley Pool is much the deepest.



BASIN OF THE ZAMBESI.

2. By its various tributaries the Congo basin is almost joined to the basins of the Nile and the Zambesi.

(1) The chief northern tributaries are the Aruwimi and the Ubangi-Welle.

(2) The chief southern tributaries are the Kasai and the Lualaba.

(3) The main stream of the Congo is at first called the Luapula.

8. The Southern Plateau.

1. This plateau is at least three-quarters of a mile high in most parts, and to the east is much more.

(1) This high eastern edge, which is generally known as the Drakensberg Mountains, reaches a height of two miles above the sea.

(2) The edge elsewhere has various names, but is generally flat on the top, so that '*Table* Mountain' would be an appropriate name for almost any part of it.

(3) It also falls to the coastlands by flat terraces, the most important of which is the Great Karroo.

(4) The coastlands are much wider in the east than in the west, where the high edge of the plateau is so near the sea that communication inland is by no means easy.

(5) The slope of the plateau inland down to the basin of Lake Ngami is much more regular, and much less fertile.

2. The most important natural features of this district are the three rivers—Zambesi, Limpopo, and Orange.

(1) The Zambesi is spoilt by many rapids, but is a noble river with a magnificent line of cataracts at the Victoria Falls.

(2) Its tributary, the Shiré, is a natural outlet of Lake Nyasa.

(3) The Limpopo has formed in the past a very important natural frontier; but (though five times as long as the Thames) it is not otherwise very useful.

(4) The same is true of the Orange River, but the supply of water in it is much less constant than in the Limpopo.

(5) The upper basin of the Orange, especially the Vaal district, is much better watered than the lower; and sometimes the river actually decreases in size as it gets nearer to the sea--across the edge of the Kalahari Desert.

9. Climate.

1. As Africa is the only continent which is crossed by both Tropics, it must receive a very great amount of direct sun heat.

(1) The sun is *always* directly overhead at noon in some part of Africa, and is directly overhead *twice every year* in most parts.

(2) As both the north-east and the south-east trade winds blow to the equator, there are two seasons of heavy rains along the equator, which in Africa runs through the Congo basin.

(3) The north-west and south-west corners of the continent get rain from the westerly winds off the Atlantic.

(4) The height of the eastern edge of the great tableland of the continent prevents the easterly winds in the Tropics from carrying the moisture very far inland.

(5) Along the two Tropics, the areas *from* which the trade winds blow, there are large stretches of land so dry that it is desert.

10. The Inhabitants.

1. Africa contains both White and Black men, and the division between them originally was the great Sahara Desert.

(1) The White man was mainly confined to regions between the Mediterranean and the north Tropic.

(2) The Black man's home was between the Sahara and the south Tropic.

2. The White men are of two main kinds—Semitic and Hamitic.

(1) The Hamitic, or older inhabitants, are mainly found in the Barbary States and Egypt, the Berbers being the chief.

(2) The Semitic inhabitants are scattered over the rest of North Africa, and are mainly Arabs.

3. The Black men are also of two main kinds—pure Negro and Bantu.

(1) The pure Negroes are generally found in their original home—the Sudan.

(2) The Bantus are scattered over the east of the great plateau.

4. There are also numerous Europeans, especially in the south, and tribes of Hottentots and Bushmen.

(1) Most of the Europeans are British, and the total population of the area under British control is considerably over 50,000,000.

11. The Political Divisions.

1. The chief countries in the north are :

(1) Morocco —capitals, Morocco and Fez.

(2) Algeria—capital, Algiers.

(3) Tunisia—capital, Tunis.

(4) Tripolitana—capital, Tripoli.

(5) Egypt—capital, Cairo.

(6) Abyssinia—capital, Addis Abeba.

2. The chief countries in the south are:

(1) Cape Colony—capital, Cape Town.
(2) Natal—capital, Pietermaritzburg.
(3) Transvaal Colony—capital, Pretoria.
(4) Orange River Colony—capital, Bloemfontein.
(5) Bechuanaland—capital, Palapye.
(6) Rhodesia—capitals, Bulawayo and Salisbury.

3. The chief countries in the west are:

(1) The Congo Free State—capital, Boma.
(2) Portuguese West Africa—capital, (St. Paolo de) Loanda.
(3) German South-West Africa—capital, Great Windhoek.
(4) French West Africa—chief capital, St. Louis.
(5) British West Africa—chief capital, Freetown.
(6) Liberia—capital, Monrovia.

4. The chief countries in the east are:

(1) British East Africa—capital, Mombasa.
(2) German East Africa—capital, Dar-es-Salaam.
(3) Portuguese East Africa—capital, Mozambique.
(4) Uganda Protectorate—capital, Nampala.
(5) Zanzibar Protectorate—capital, Zanzibar.
(6) British Somaliland—capital, Berbera.

12. The Barbary States.

1. This title includes Morocco, Algeria, Tunisia, and Tripolitana.

(1) The title was originally applied to the coastlands inhabited by the Berber, or Barbary, pirates.

2. Morocco is an independent State ruled by a Sultan.

(1) It is nearly four times the size of England, but the population is less than that of London.

(2) The 'Berbers' live up in the mountains; the 'Moors' live down on the plain.

(3) The Sultan moves from place to place, and so has at least two capitals, Morocco and Fez.

(4) Mequinez is often also called a capital.

(5) The largest city is Fez, which collects the almonds and dates from the oases, and the wool and leather from the mountainous parts, to be forwarded for export from Tangier.

3. Algeria is a French colony, and is larger than any other French colony.

(1) The most fertile part is the Tell, which grows oranges, lemons, olives, etc.

(2) The higher slopes grow the vine and the cork-oak.

(3) The dry plateau inland is covered with alfa, or esparto grass, which is used in paper-making.

(4) There is abundance of mineral wealth in lead, silver, copper, and iron.

(5) Algiers and Oran are the chief ports, and Constantine is the chief inland centre.

4. Tunisia is also under France, and has been much improved by the French.

(1) The capital, Tunis, is a caravan terminus; it also stands near the ruins of the ancient city of Carthage.

(2) The productions are very much the same as those of Algeria—fruit, cork, and esparto.

5. Tripolitana is a province of Turkey.

(1) Tripoli is the great caravan terminus of North Africa, the chief routes inland going by Murzuk and Ghat or Kufra.

(2) Like other Turkish possessions, it is very backward.

13. Egypt, etc.

1. Egypt has a nominal area more than three times the size of the whole United Kingdom, but the really useful part of it is not much larger than Wales.

(1) Except along the great river—that is, as far as the fertilising floods can reach, the land is all desert.

(2) It is divided into Upper Egypt, or the Nile valley, and Lower Egypt, or the Nile delta.

(3) The Nile valley is divided between Upper Egypt and Nubia, or the Eastern Sudan.

2. The most fertile parts are the Delta and the Fayum, a depression near the river.

(1) The chief crops are grain, cotton, and sugar.

(2) The productions can be exported through Alexandria and Port Said, and through Suez and Suakin.

(3) There is also an important river-side railway, as the navigation of the river south of Assuan is practically stopped by cataracts.

3. The country is nominally ruled by a

Khedive, who pays tribute to the Sultan of Turkey.

(1) Since 1882, however, the country has been 'occupied' by the British Government.

(2) This occupation involved some serious fighting, especially against the Mahdi in Nubia.

4. The importance of Nubia lies in the fact that it controls both the Blue Nile and the Atbara.

(1) It also controls traffic between the regions known as Kordofan, Darfur, and Wadai, and the Red Sea ports of Massowah and Suakin.

(2) Much the most important town is Khartum, or Omdurman, at the confluence of the Blue and the White Nile.

5. Abyssinia is too well defended by its natural ramparts of rock to have been conquered either by Egypt or by a European Power.

(1) The people are nominally Christians, Gondar being their religious capital.

(2) The narrow coastland of 'Eritrea' now belongs to Italy, the capital being the valuable harbour of Massowah.

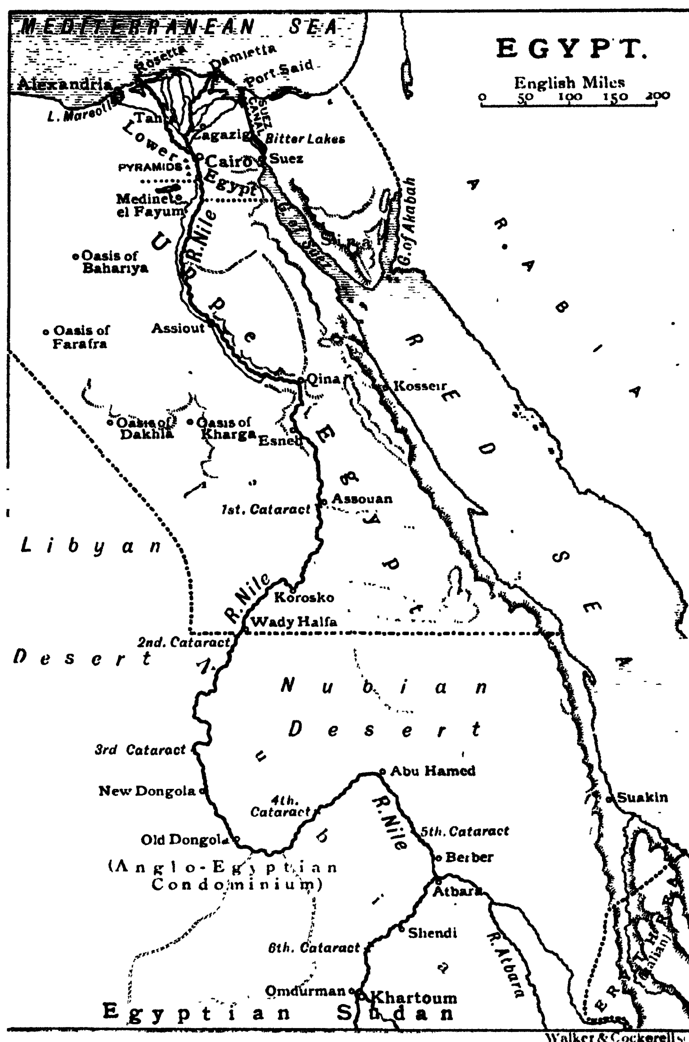
14. East Africa.

1. Somaliland is inhabited mainly by wandering shepherds who acknowledge no control.

(1) The coast is held, however, by Britain, France, and Italy.

(2) The French port of Obok commands the Bab-el-Mandeb ('Gate of Tears') Strait.

(3) The ports of Zeila and Berbera, like the island of Socotra, belong to Britain.


EGYPT.
English Miles
0 50 100 150 200
MEDITERRANEAN SEA
Alexandria
Rosetta
Damietta
Port Said
L. Mareotis
Tanta
Zagazig
Bitter Lakes
SUEZ CANAL
Cairo
Suez
PYRAMIDS
Lower Egypt
Medinet el Fayum
R. Nile
Oasis of Bahariya
G. of Akabah
Sinai
ARABIA
Oasis of Farafra
Assiout
Upper Egypt
RED SEA
Qina
Kosseir
Oasis of Dakhla
Oasis of Kharga
Esneh
Assouan
1st. Cataract
Libyan Desert
R. Nile
Korosko
Wady Halfa
2nd. Cataract
Nubian Desert
3rd Cataract
Abu Hamed
New Dongola
4th. Cataract
R. Nile
Suakin
5th. Cataract
Old Dongola
Berber
(Anglo-Egyptian Condominium)
Atbara
Shendi
R. Atbara
6th. Cataract
Omdurman
Khartoum
Egyptian Sudan
Walker & Cockerell sc

2. From the equator down to Delagoa Bay the coast and the land behind it has been divided by three European Powers among themselves.

(1) Germany has annexed the central section, touching the three great lakes—Victoria Nyanza, Tanganyika, and Nyasa. Dar-es-Salaam is the chief centre.

(2) Britain has annexed the northern section, so as to control the upper waters of the Nile. Mombasa is the chief centre.

(3) Portugal owns the southern section, but has less 'hinterland'—as the interior is called—than the other two Powers. Mozambique is the capital, but Quilimane is the chief port.

15. West Africa.

1. Siberia, like the British Colony of Sierra Leone, was founded for freed negro slaves.

(1) It is a Republic, with its capital at Monrovia.

2. Britain, Portugal, Germany, France, and Belgium control the rest of West Africa.

(1) Besides Sierra Leone (capital, Freetown), the British possessions include Gambia (capital, Bathurst), The Gold Coast (capital, Accra), Lagos (with capital of the same name), and Nigeria (capital, Old Calabar).

(2) The French possessions include Senegal (capital, St. Louis), French Guinea (capital, Konakry), The Ivory Coast (capital, Grand Bassam), Dahomey (capital, Abomey, and chief port, Whydeh), and French Congo (capital, Libreville, and chief town, Loango).

(3) The German possessions include Togoland (capital, Sebbe Cameroons (with capital of same name), and German South-West Africa (capital, Great Windhoek, and chief port, Angra Pequena).

N.B.—This area is really controlled by the British possession of Walfish Bay.



BASIN OF THE NIGER.

(4) The Portuguese possessions include Portuguese Guinea (capital, Bolama), and Portuguese West Africa—often called Angola—(capital, Loanda).

(5) The Congo Free State is under the King of the Belgians (capital, Boma).

16. South Africa. I.

1. South Africa may now be considered as entirely British, the four chief divisions being Cape Colony, Natal, Orange River Colony, and Transvaal Colony.

(1) It contains a great deal of fine pasture, and is exceedingly rich in gold and diamonds.

(2) Parts of it are also very well suited to agriculture, and contain other minerals, including copper and good coal.

2. Cape Colony was formally annexed by Britain about the time of the battle of Waterloo.

(1) Its importance in the past has been rather military than commercial, and it still commands one of the chief ocean routes of the world.

(2) The climate is generally healthy and bracing; the chief products are pastoral—wool, mohair, skins, and ostrich feathers; the chief minerals are diamonds and copper.

(3) The chief ports are Cape Town, Port Elizabeth, and East London, and there is a naval station in Simon's Bay.

(4) The *Western Railway* runs from Cape Town to Kimberley and Mafeking (for Bulawayo); the *Midland* runs from Port Elizabeth to Colesberg (for Kimberley); and the *Eastern* runs from East London to Aliwal North.

(5) The chief inland towns are Grahamstown, Graaf Reinet, Kimberley, Vryburg, and Mafeking.

3. Basutoland has been a British Protectorate since 1884.

(1) It produces splendid wheat and ponies.

(2) The capital is Maseru.


BRITISH SOUTH AFRICA.
English Miles
0 100 200 300 400
CONGO STATE
GERMAN EAST AFRICA
L.Tanganyika
L.Hikwa
Rhodesia
Abercorn
Karonga
L.Bangweolo
BR. CENTRAL AF. PROTECTORATE
ANGOLA (Portuguese)
Zambesi
Loangwa
Sitanda
Boruma
R. Zambesi
Lialui
R. Zambesi
Kafue
Blantyre
Tete
Kanzalo Rapids
Victoria Falls
RHODESIA
Salisbury
Umtali
Chobe Swamp
Inyati
Gwelo
Bulawayo
Shangani
Matopo Hills
GERMAN SOUTH WEST AFRICA
L.Ngami
KHAMA'S COUNTRY
Palapye
Tuli
BECHUANALAND
Kalahari
(British Protectorate)
Desert
Limpopo R.
Pietersburg
Olifants R.
PORTUGUESE EAST AFRICA
TRANSVAAL
Pretoria
Lydenburg
Lorenzo Marques
Delagoa Bay
Mafeking
Vryburg
Johannesburg
Nosob
Molopo R.
Bechuanaland
(to Cape Colony)
Vaal R.
Kroonstad
Griqua Ld. West
ORANGE RIVER COLONY
Zulu Land
Ladysmith
Orange R.
Kimberley
Bloemfontein
NATAL
R. Tugela
Port Nolloth
Great Bushman Land
Ookiep
Prieska
Pietermaritzburg
Durban
Carnarvon
De Aar
Aliwal North
Dordrecht
Calvinia
CAPE COLONY
Port St.Johns
Olifants R.
St. Helena B.
Nieuwveld
Graaff Reinet
Gt.Kei R.
East London
Great Karroo
Table Bay
Cape Town
Paarl
C. of Good Hope
Gt. Fish R.
Grahamstown
Algoa Bay
Port Elizabeth
Sunday R.
C. Seal
Mossel Bay
Breede R.
False Bay
C. Agulhas
INDIAN OCEAN
Walker & Cockerell sc.

4. The Bechuanaland Protectorate is mainly desert, but includes some good land in Khama's Country.

(1) The capital is Palapye; the chief mineral is salt from the basin of L. Ngami.

5. Natal was annexed to Cape Colony in 1843, and became practically a separate colony in 1856.

(1) It now has its own responsible government, and includes Zululand and Tongoland.

(2) It is not quite so healthy generally as Cape Colony; it produces sugar and tea on the coast lands, the middle district is devoted to mixed farming, and the highlands to sheep and goats. There are valuable coalfields round Newcastle.

(3) The only port is Durban; the chief inland towns are Pietermaritzburg, Ladysmith, Colenso, and Dundee.

(4) At Ladysmith the railway from Durban divides, one branch going through Newcastle to Johannesburg, and the other through Harrismith to join the 'Cape to Cairo' main line at Kroonstad.

(5) The capital of Zululand is Eshowe.

1V. South Africa. II.

1. The Orange River Colony was originally annexed by Britain in 1848, but was granted independence from 1854 to 1900.

(1) The climate is dry and healthy; the chief products are wool, skins, coal, and diamonds.

(2) Bloemfontein is the capital, the other chief towns being Kroonstad, Heilbron, and Harrismith.

2. The Boers in the Transvaal were allowed to be virtually independent from 1852 to 1878, and from 1880 to 1900.

(1) In 1878, owing to their helplessness against the Zulus, the territory was taken under the protection of Britain; but the Boers revolted against this in 1880, and were given this virtual independence after the fatal battle of Majuba Hill.

(2) The chief products are gold—in great abundance—wool, and hides. Coal, silver, and other minerals are found; and wheat is grown.

(3) Pretoria is still the capital, but the great gold centre of Johannesburg is by far the most important place. Among the other chief towns are Heidelberg, Klerksdorp, and the former capital of Potchefstroom.

3. Rhodesia was developed by the British South Africa Company.

(1) The north was opened up by Dr. Livingstone; in the south the savage Matabilis had to be fought in 1893, and their country was annexed.

(2) The climate is generally healthy; the soil is very rich in many places, growing all kinds of fruit and grain; and there is abundance of mineral wealth, especially gold.

(3) The two chief towns are Bulawayo and Salisbury; but Fort Tuli, Victoria, and Charter are also important.

18. African Islands.

1. The chief British islands are Mauritius, St. Helena, Ascension, Tristan d'Acunha, and Socotra.

(1) The capital of the great sugar-producing island of Mauritius is Port Louis.

(2) St. Helena was the scene of Napoleon Bonaparte's exile from 1815 to 1821. Its capital is Jamestown.

(3) Ascension is a dead volcano; its shores are much frequented by turtles; its port is Georgetown.

2. The chief French islands are Madagascar and Réunion, or Bourbon.

(1) The capital of Réunion is St. Denis.

(2) Madagascar was conquered by the French in 1896. Its chief native inhabitants are the Hovas; the capital is Antananarivo; and Tamatave is the best harbour.

3. The chief Spanish islands are the Canaries.

(1) They are thirteen in all, and most of them are extinct volcanoes. The capital, Vera Cruz, is on the island of Teneriffe. The chief town of the Grand Canary is Las Palmas.

(2) The products include wine and cochineal.

4. The chief Portuguese islands are Madeira and the Cape Verd group.

(1) The volcanic island of Madeira is famous for its wine (called 'Madeira') and its climate.

(2) The capital, Funchal, is a great resort of invalids.

(3) The Cape Verd Islands were useful outposts for explorers in ancient times.

B.—AUSTRALIA.

1. Size, Shape, etc.

Australia is the smallest of the six continents, both in size and in population.

(1) It contains only 3,000,000 square miles of land, most of which is uninhabited and uninhabitable.

(2) From Steep Point to Cape Byron is about 2500 miles, and from Cape York to Wilson Promontory is nearly 2000 miles.

(3) In proportion to its area, however, the continent has very little coast, and few good harbours.

(4) It has also very few islands, and none of them except Tasmania are really important.

(5) The larger islands (of course, excepting Tasmania), such as Melville and Bathurst in the north, and Kangaroo and Flinders in the south, are practically useless. Some of the smaller ones, such as Thursday Island, are very useful as harbours of refuge.

(6) On the east the Great Barrier Reef is really a series of coral islands.

(7) The points where the coast of Australia comes nearest to the coasts of neighbouring islands, are important straits—Torres Strait being 90 miles wide and Bass Strait being 140 miles wide.

2. Mountains and Tablelands.

1. Like Africa, Australia is a continent of wide tablelands.

(1) Almost all the so-called mountains are really the edges of these tablelands, which from the ocean do really look like mountains.

(2) Almost the whole of the western half of the continent forms one more or less continuous tableland of at least 1000 feet above the sea.

(3) The eastern half also contains a great proportion of tableland, but it is much higher than the west round the edge and much lower in the centre.

(4) As these tablelands are higher in the east than in the west, the backbone of the continent may be said to be the ridge of high land which is called generally the Great Dividing Range.

2. The various parts of this Great Dividing Range have separate names, the most important being the Alps and the Blue Mountains.

(1) The Australian Alps form the chief mountain range of the continent, rising to over 7300 feet in Mount Townsend and Mount Kosciusko.

(2) The two most important rivers of the continent, the Murray and its tributary the Murrumbidgee, rise in these mountains.

(3) The Blue Mountains are not much more than half the height of the Alps, the highest point, Mount Beemarang, being just over 4000 feet.

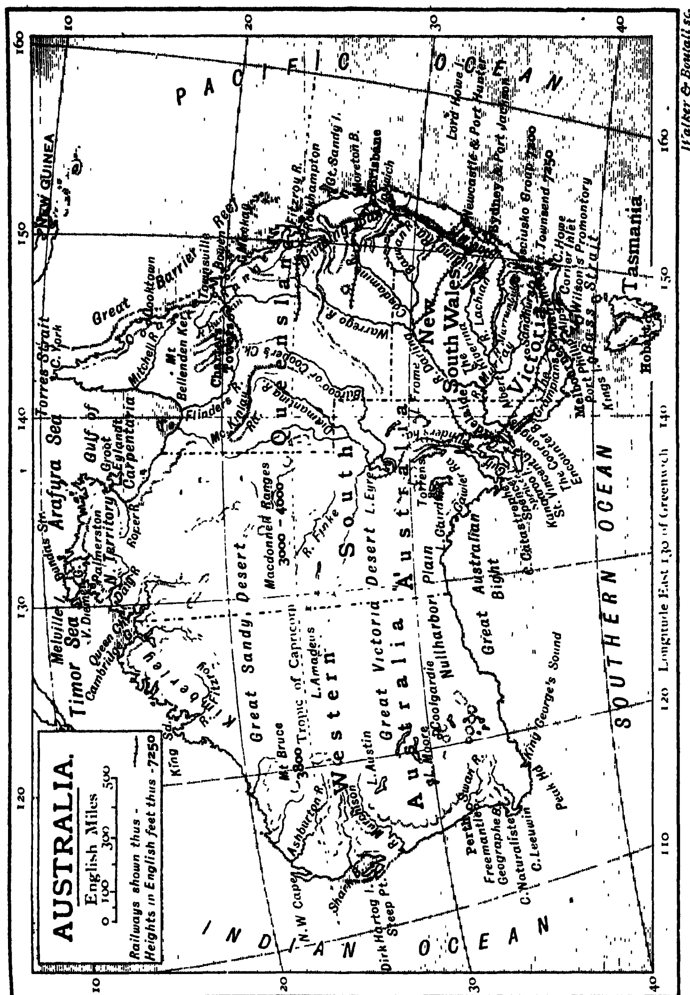
3. River System.

1. Australia has only one real river system, which empties into the large low basin in the south-east (cf. II. § 1 (3) above).

(1) This low basin includes parts of all the colonies except West Australia, and receives all the great rivers.

(2) It was probably at one time a shallow inland sea or large ocean gulf, and there is still a 'shore' of coral almost all round it.

(3) The only permanent rivers which empty into this basin come in from the east.


AUSTRALIA.
English Miles
0 100 300 500
Railways shown thus -
Heights in English feet thus ·7250
PACIFIC OCEAN
INDIAN OCEAN
SOUTHERN OCEAN
NEW GUINEA
Torres Strait
C. York
Great Barrier Reef
Cooktown
Arafura Sea
Timor Sea
Gulf of Carpentaria
Groot Eylandt
Melville I.
Dundas Str.
Palmerston
N. Territory
Roper R.
Daly R.
Queen Ch.
Cambridge G.
V. Diemen G.
Kimberley
R. Fitzroy
King Sd.
Great Sandy Desert
Macdonnell Ranges 3000-4000
Tropic of Capricorn
L. Amadeus
R. Finke
Western Australia
South Australia
Queensland
Great Victoria Desert
L. Eyre
Nullarbor Plain
L. Gairdner
Gawler Ra.
Great Australian Bight
Coolgardie
L. Moore
L. Austin
Mt Bruce 3800
Ashburton R.
Murchison R.
N.W. Cape
Dirk Hartog I.
Steep Pt.
Perth
Freemantle
Geographe B.
C. Naturaliste
C. Leeuwin
Swan R.
King George's Sound
Flinders R.
Mitchell R.
Mt Bellenden Ker
Townsville
Bowen
Mackay
Fitzroy R.
Rockhampton
Gt. Sandy I.
Moreton B.
Brisbane
Ipswich
Dividing Range
Condamine
Warrego R.
Barcoo or Cooper's Ck.
Diamantina R.
Darling R.
New South Wales
Lachlan R.
Murray R.
Newcastle & Port Hunter
Sydney & Port Jackson
Lord Howe I.
Kosciusko Group 7300
Mt Townsend 7250
C. Howe
Corner Inlet
Wilson's Promontory
Bass Strait
Tasmania
Hobart
Kings I.
Port Phillip
Melbourne
Victoria
The Grampians
The Alps
Adelaide
L. Torrens
Flinders Ra.
L. Frome
Spencer G.
St. Vincent G.
Kangaroo I.
Encounter B.
The Coorong
C. Catastrophe
Longitude East 130 of Greenwich
Walker & Boutall sc.

2. The one great river is the Murray, with its chief tributaries, the Murrumbidgee, Lachlan, and Darling.

(1) These together contributed enough water to enable the main stream to force its way out through gorges in the limestone into the ocean.

(2) The total length of the Murray is about 1000 miles.

3. The rivers which flow from the edge of the tableland directly to the nearest ocean are short and rapid.

The most important of them are the Fitzroy and the Burdekin, in Queensland.

4. The rivers which flow into the great basin, but are not able to force their way out to the sea, are the least important of all.

(1) Most of them empty into Lake Eyre, the largest (in flood time) being the Cooper.

(2) As they all run more or less dry, except during the rainy season, they are generally called *creeks*, not rivers.

(3) Water can usually be found, even during a long drought, in the beds of most of them by digging wells of from 12 to 20 feet in depth.

4 The Climate.

1. As Australia is in the southern hemisphere, the north must be hotter than the south.

(1) The north is actually inside the Tropics, so that the summer heat is intense.

(2) The inhabited part of the north is also lower than the inhabited part of the south, and the lowness increases the heat.

(3) The north is, again, much moister than the south, and the moistness makes the heat still less bearable.

(4) Along the coast, however, the heat is not so intense as in similar latitudes inland.

(5) In the extreme south-east there is snow in winter, but generally only on the high mountains.

2. There are two seasons, not four—a hot bright summer and a warm bright winter.

(1) The dryness, which makes the climate very healthy, implies the absence of clouds; and this is very cheering to sick and delicate persons.

(2) The changes of the seasons cause a kind of monsoon wind, such as blows in India. In the hot season the wind blows inland from the sea, and in the cooler season it blows seaward from the interior.

(3) The north and middle of the country are within the range of the Trade winds, which always blow from the east, and are strongest in summer; so that these parts of the continent get most rain in summer.

(4) The south of the country is within the latitude of the great West winds which are strongest in winter; so that the south gets most rain in winter.

(5) The rainfall almost everywhere, however, is very uncertain, and droughts and floods are equally dangerous.

3. As the edge of the plateau is higher than the interior, most of the rain-clouds are condensed into rain before they get inland.

(1) This, with the accompanying terrific heat inland, causes huge areas of desert.

(2) The gales which blow from the desert, generally carry with them clouds of fine dust.

(3) The only rain in some parts of the interior comes from thunder-storms, which, though short, are terribly violent.

5. Plants.

1. The native plants of the continent are very peculiar, the most dangerous being the spinifex and the mallee, and the most useful being the eucalyptus, and the native grasses.

(1) Thousands of miles are covered with the spinifex grass, which is so hard and sharp that it inflicts terrible wounds on animals that walk over it or try to eat it. Horses and cattle often bleed to death from wounds so inflicted.

(2) The mallee scrub covers the ground with straight stalks 10 to 15 feet high, through which it is almost impossible for man or beast to penetrate.

(3) The eucalyptus grows on the coasts and the edge of the tableland. It grows to a great height, sometimes over 400 feet, and is valuable ; but it is a dingy, dreary-looking object.

(4) The native grasses have a wonderful power of resisting heat and drought, and supply magnificent pasture for sheep.

2. The most useful plants are those which have been imported.

(1) The imported grains are mainly wheat and maize. The wheat is most important in the south, and the maize in north-east.

(2) Amongst the imported fruit, grapes and oranges are most important ; both do best towards the south, the oranges along the coast and the grapes on the inside of the edge of the tableland.

6. The Animals.

1. The native animals of Australia, like the native plants, are very peculiar.

(1) Most of them are of a very old type, and are not found now in any other part of the world, though skeletons of similar creatures have been dug up elsewhere.

(2) The only native animals, indeed, which are like those of other continents, are the Dingo and the Flying Fox. The Dingo is a species of dog, and the Flying Fox is a species of bat which eats fruit.

(3) Almost all the other animals are marsupials, carrying their young ones in 'pouches.' The most common are kangaroos and opossums.

(4) There are also millions of birds, including cockatoos and emus ; and crocodiles are found in the northern rivers.

2. The imported animals, like the imported plants, are more useful than the native.

(1) The most valuable of all are the sheep, which are most numerous in New South Wales, but produce the best wool in Victoria.

(2) The cattle are mainly confined to the coast-lands, especially in the east.

(3) Horses are absolutely necessary on the sheep-farms, on account of the great distances which the shepherds have to travel.

The People.

1. The native people, like the native plants and animals, are peculiar, for they are the most depraved savages on the face of the earth.

(1) They are very ugly and exceedingly cruel, often killing and eating old people who have become rather a burden to their relations.

(2) They have no regular rulers or government, and are so uncivilized that they do not even live in houses.

(3) Their food includes snakes, frogs, and all kinds of insects, which they eat raw.

(4) They have two special weapons—the boomerang and the throwing-stick.

(5) Their one special faculty is their marvellous skill in finding water.

2. The immigrants present a very different picture.

(1) Most of them are British, and are occupied in sheep-farming, mining, and commerce.

(2) There are also many Germans, who are specially successful in vine growing.

(3) In the north and north-east there are some thousands of Chinese, who do the heavy work.

New South Wales.

1. New South Wales is the oldest colony, and is more than twice the size of the United Kingdom.

(1) The average population over this large area is not great, but most of the people are crowded together on the coast-lands and the edge of the tableland.

(2) The great products of the colony are wool from the interior and coal from the coast.

(3) Cattle, maize, sugar, and bananas are also raised on the coast-lands ; and horses and wheat on the tableland.

2. The towns are of several kinds, Sydney being, however, the only instance of a really large city.

(1) The most important of the smaller places are the coast-towns, such as Newcastle, Paramatta, and Grafton.

(2) Next to these come towns like Bathurst, Maitland, and Goulburn, centres of mixed farming on the edge of the tableland.

(3) The most numerous, but the smallest, are the sheep-farming centres, such as Wagga-Wagga, Deniliquin, Hay, Bourke, and Albury.

(4) In the far west there are the mining towns of Silverton and Broken Hill.

Victoria.

1. Victoria is the smallest colony, but is really the most prosperous.

(1) The reason for its prosperity is the extraordinary amount of gold which has been found in it.

(2) Another reason is that both the climate and the soil are better than those of the other Australian Colonies.

2. The towns resemble those of New South Wales, Melbourne being the only really large city.

(1) The most important are the gold-centres, which lie along the central range of mountains—Ballarat, Bendigo, and Castlemaine being the chief.

(2) The farming-centres are next in importance, such as Sale and Hamilton, or Echuca and Mildura, the latter depending on the Murray irrigation works.

(3) There are several small ports, such as Geelong and Warrnambool.

South Australia.

South Australia forms nearly one-third of all Australia, but is mainly desert.

(1) The population is, therefore, very small, Adelaide being the only town of any size.

(2) The other centres are mainly either copper-mining villages, such as Walleroo and Moonta, or ports, such as Pirie, Augusta, and Palmerston.

(3) There are fine vineyards round Gawler and Mount Gambier.

Queensland.

1. Queensland is five times the size of the United Kingdom, and is the most 'tropical' of the colonies.

(1) The mixture of dampness and heat which is so characteristic of 'tropical' lands, makes the colony the least healthy of all the Australian colonies.

(2) For the same reason there are many 'coloured' labourers, including fully 10,000 Chinese.

(3) The products are mainly 'tropical,' sugar, maize, rice, arrowroot, and bananas.

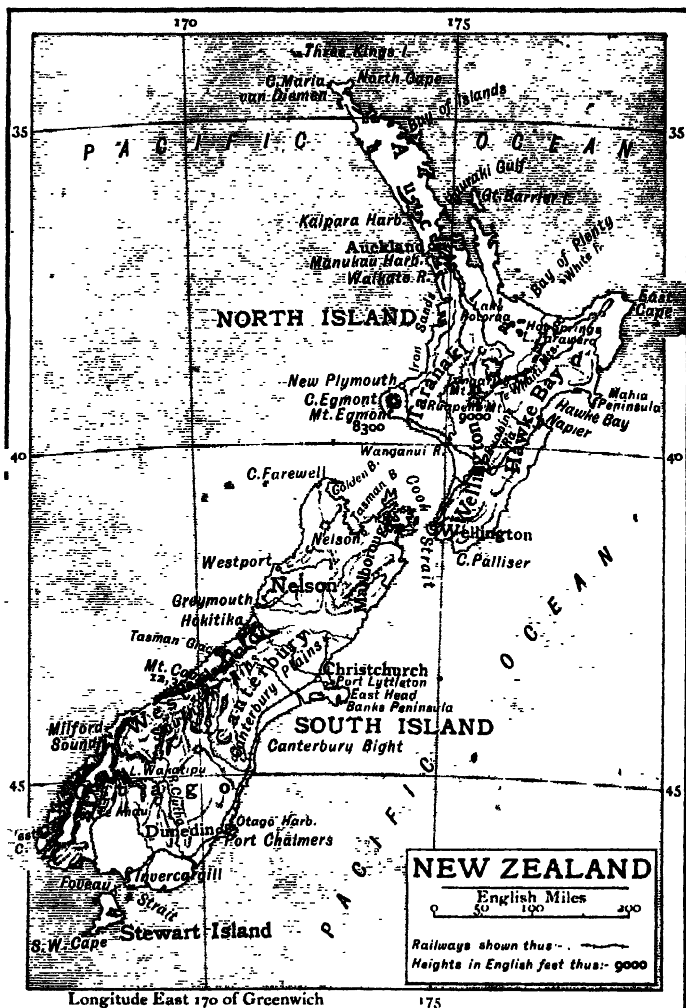
2. The towns are smaller than even those of South Australia, and most of them are ports.

(1) Brisbane, the capital, is also the chief port, but it does not compete with Rockhampton, Townsville, and Cooktown.

(2) The chief mining-centres are Mount Morgan, Charters Towers, and Gympie.

(3) The chief sugar-centres are Maryborough, Mackay, and Bundaberg.

(4) The chief sheep-farming centres are Rome and Toowoomba.



NEW ZEALAND
English Miles
0 50 100 200
Railways shown thus
Heights in English feet thus:- 9000
Longitude East 170 of Greenwich
175
170
35
40
45
NORTH ISLAND
SOUTH ISLAND
Stewart Island
Auckland
Wellington
Christchurch
Dunedin
Invercargill
New Plymouth
Nelson
Westport
Greymouth
Hokitika
Napier
Hawke Bay
East Cape
C.Palliser
C.Farewell
C.Egmont
Mt.Egmont
8300
Kaipara Harb.
Manukau Harb.
Waikato R.
Wanganui R.
Cook Strait
Canterbury Bight
Canterbury Plains
Port Lyttleton
East Head
Banks Peninsula
Otago Harb.
Port Chalmers
Milford Sound
L.Wakatipu
Foveau Strait
S.W.Cape
Three Kings I.
North Cape
C.Maria van Diemen
Bay of Islands
Hauraki Gulf
Gt.Barrier I.
Bay of Plenty
Mahia Peninsula
Tasman Glacier
Canterbury Bight
PACIFIC OCEAN
Walker & Boutall sc

Western Australia.

Western Australia—or Westralia, as it is often called—is even larger than South Australia, and contains even more desert.

(1) Three-quarters of it is still more or less unexplored, and entirely unsettled.

(2) The chief coast towns are Perth, Fremantle, and Albany.

(3) The great gold-centres are Coolgardie and Kalgurli.

Tasmania.

Tasmania resembles Scotland in size and scenery, but resembles England in climate.

(1) The two chief towns are the ports of Hobart and Launceston

(2) The two chief industries are tin-mining and sheep-farming.

C.—NEW ZEALAND.

New Zealand is called, for several reasons, the "Britain of the South."

(1) Its most interesting geographical features are the Cook and the Foveaux Straits, the Waikato and Clutha rivers, the Southern Alps and the volcanoes of Egmont and Ruapehu.

(2) Its most important products are wool, mutton, coal, and gold.

(3) Its most important towns are the harbours of Wellington, Auckland, Christchurch, Dunedin, and Nelson.

(4) The North Island contains a wonderful 'Hot Lakes' district, and the native Maoris are a most interesting people, the finest of all coloured tribes.

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